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Appendix A

# Data Tables

**Table A-1.** National Air Quality Trends Statistics for Criteria Pollutants, 1987–1996

Statistic	Units	# of Sites	Percentile	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<b>Carbon Monoxide</b>													
2nd Max. 8hr.	PPM	345	95th	11.9	11.2	11.1	10.6	9.9	8.6	8.1	8.1	7.7	7.3
"	"	"	90th	10.0	10.3	9.8	8.8	8.8	7.9	7.3	7.6	7.0	6.5
"	"	"	75th	8.3	7.8	7.8	7.1	6.9	6.4	5.8	6.2	5.5	5.1
"	"	"	50th	6.3	6.1	6.0	5.5	5.2	4.8	4.7	4.9	4.2	3.9
"	"	"	25th	4.7	4.3	4.4	4.2	3.9	3.7	3.6	3.8	3.2	3.0
"	"	"	10th	3.6	3.4	3.5	3.1	3.0	2.8	2.9	2.8	2.5	2.4
"	"	"	5th	3.0	3.0	2.8	2.6	2.4	2.5	2.3	2.3	2.3	2.1
"	"	"	Arith. Mean	6.7	6.4	6.4	5.9	5.6	5.2	4.9	5.1	4.5	4.2
<b>Lead</b>													
Max. Qtr.	µg/m³	208	95th	0.41	0.37	0.27	0.26	0.19	0.17	0.16	0.13	0.11	0.12
"	"	"	90th	0.24	0.22	0.17	0.17	0.15	0.12	0.10	0.09	0.08	0.08
"	"	"	75th	0.14	0.13	0.11	0.09	0.07	0.06	0.06	0.05	0.05	0.04
"	"	"	50th	0.09	0.08	0.06	0.05	0.04	0.03	0.03	0.03	0.03	0.02
"	"	"	25th	0.06	0.04	0.04	0.03	0.02	0.02	0.02	0.02	0.01	0.01
"	"	"	10th	0.04	0.03	0.03	0.02	0.01	0.01	0.01	0.01	0.01	0.01
"	"	"	5th	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
"	"	"	Arith. Mean	0.16	0.12	0.09	0.09	0.07	0.06	0.05	0.04	0.04	0.04
<b>Nitrogen Dioxide</b>													
Arith. Mean	PPM	214	95th	0.043	0.046	0.043	0.041	0.043	0.039	0.037	0.041	0.039	0.038
"	"	"	90th	0.038	0.037	0.035	0.034	0.033	0.033	0.033	0.034	0.032	0.032
"	"	"	75th	0.027	0.027	0.027	0.026	0.025	0.024	0.025	0.025	0.024	0.024
"	"	"	50th	0.020	0.021	0.020	0.019	0.019	0.019	0.019	0.020	0.019	0.018
"	"	"	25th	0.013	0.013	0.013	0.012	0.012	0.012	0.012	0.012	0.012	0.012
"	"	"	10th	0.006	0.007	0.007	0.006	0.006	0.006	0.006	0.006	0.005	0.006
"	"	"	5th	0.004	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004
"	"	"	Arith. Mean	0.021	0.022	0.021	0.020	0.020	0.019	0.019	0.020	0.019	0.019
<b>Ozone</b>													
2nd Max. 1hr.	PPM	600	95th	0.183	0.202	0.190	0.177	0.175	0.160	0.160	0.154	0.158	0.145
"	"	"	90th	0.166	0.180	0.151	0.150	0.150	0.133	0.140	0.133	0.140	0.129
"	"	"	75th	0.140	0.151	0.125	0.121	0.124	0.113	0.120	0.118	0.124	0.115
"	"	"	50th	0.117	0.128	0.107	0.108	0.108	0.100	0.105	0.105	0.111	0.104
"	"	"	25th	0.102	0.109	0.096	0.095	0.095	0.090	0.092	0.093	0.099	0.094
"	"	"	10th	0.090	0.092	0.085	0.083	0.082	0.082	0.080	0.082	0.085	0.085
"	"	"	5th	0.083	0.083	0.080	0.074	0.075	0.076	0.074	0.075	0.077	0.079
"	"	"	Arith. Mean	0.124	0.133	0.116	0.113	0.114	0.106	0.108	0.108	0.113	0.106

**Table A-1.** National Air Quality Trends Statistics for Criteria Pollutants, 1987–1996 (continued)

Statistic	Units	# of Sites	Percentile	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<b><i>PM<sub>10</sub></i></b>													
Annual Avg.	µg/m <sup>3</sup>	900	95th	—	52.5	52.7	46.2	46.1	42.1	41.5	40.0	39.6	38.4
"	"	"	90th	—	44.0	43.9	39.7	39.5	36.4	36.0	36.6	35.0	33.6
"	"	"	75th	—	37.6	36.8	34.2	33.4	31.0	30.1	30.5	29.3	27.9
"	"	"	50th	—	30.5	30.1	28.0	28.2	25.6	25.4	25.4	24.3	23.3
"	"	"	25th	—	25.8	25.6	23.4	23.5	21.9	21.0	21.1	20.0	19.4
"	"	"	10th	—	20.6	20.6	19.1	18.5	17.9	16.8	16.8	15.9	16.0
"	"	"	5th	—	17.5	17.4	16.4	15.1	13.9	13.4	13.1	12.7	13.2
"	"	"	Arith. Mean	—	32.2	32.0	29.4	29.1	26.8	26.0	26.2	25.1	24.2
<b><i>Sulfur Dioxide</i></b>													
Arith. Mean	PPM	479	95th	0.0183	0.0195	0.0182	0.0165	0.0160	0.0153	0.0146	0.0137	0.0115	0.0113
"	"	"	90th	0.0154	0.0155	0.0153	0.0144	0.0132	0.0127	0.0124	0.0121	0.0100	0.0098
"	"	"	75th	0.0116	0.0116	0.0114	0.0105	0.0099	0.0095	0.0092	0.0089	0.0073	0.0074
"	"	"	50th	0.0083	0.0084	0.0081	0.0076	0.0075	0.0068	0.0067	0.0064	0.0051	0.0053
"	"	"	25th	0.0053	0.0053	0.0050	0.0045	0.0046	0.0043	0.0040	0.0037	0.0033	0.0033
"	"	"	10th	0.0021	0.0023	0.0023	0.0020	0.0020	0.0020	0.0021	0.0020	0.0017	0.0017
"	"	"	5th	0.0013	0.0016	0.0016	0.0014	0.0015	0.0013	0.0014	0.0015	0.0014	0.0014
"	"	"	Arith. Mean	0.0089	0.0089	0.0087	0.0081	0.0078	0.0073	0.0071	0.0068	0.0056	0.0056
2nd Max. 24hr.	PPM	480	95th	0.0915	0.0920	0.0935	0.0810	0.0710	0.0710	0.0680	0.0710	0.0570	0.0590
"	"	"	90th	0.0725	0.0720	0.0760	0.0650	0.0600	0.0590	0.0580	0.0590	0.0470	0.0465
"	"	"	75th	0.0530	0.0560	0.0530	0.0500	0.0455	0.0443	0.0420	0.0440	0.0330	0.0340
"	"	"	50th	0.0390	0.0400	0.0390	0.0340	0.0320	0.0310	0.0285	0.0320	0.0220	0.0235
"	"	"	25th	0.0245	0.0260	0.0240	0.0215	0.0210	0.0190	0.0190	0.0190	0.0160	0.0160
"	"	"	10th	0.0100	0.0125	0.0120	0.0100	0.0100	0.0100	0.0100	0.0080	0.0080	0.0085
"	"	"	5th	0.0055	0.0065	0.0065	0.0050	0.0060	0.0045	0.0050	0.0050	0.0040	0.0040
"	"	"	Arith. Mean	0.0420	0.0439	0.0420	0.0380	0.0347	0.0335	0.0326	0.0335	0.0259	0.0268

**Table A-2.** National Carbon Monoxide Emissions Estimates, 1987–1996 (thousand short tons)

<b>Source Category</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
<b>FUEL COMBUSTION</b>	<b>6,967</b>	<b>7,379</b>	<b>7,449</b>	<b>5,510</b>	<b>5,856</b>	<b>6,155</b>	<b>5,586</b>	<b>5,519</b>	<b>5,934</b>	<b>5,962</b>
Electric Utilities	307	320	327	363	349	350	363	370	372	377
coal	223	236	239	234	234	236	246	247	250	263
oil	20	25	26	20	19	15	16	15	10	11
gas	53	48	51	51	51	51	49	53	55	44
internal combustion	10	11	11	57	45	47	51	55	58	59
Industrial	649	669	672	879	920	955	1,043	1,041	1,056	1,072
coal	85	87	87	105	101	102	101	100	98	99
oil	46	46	46	74	60	64	66	66	71	72
gas	252	265	271	226	284	300	322	337	345	348
other	171	173	173	279	267	264	286	287	297	305
internal combustion	96	98	96	195	208	227	268	251	245	247
Other	6,011	6,390	6,450	4,269	4,587	4,849	4,181	4,108	4,506	4,513
residential wood	5,719	6,086	6,161	3,781	4,090	4,332	3,679	3,607	3,999	3,993
other	292	303	288	488	497	517	502	502	506	520
<b>INDUSTRIAL PROCESSES</b>	<b>6,851</b>	<b>7,034</b>	<b>7,013</b>	<b>5,852</b>	<b>5,740</b>	<b>5,683</b>	<b>5,898</b>	<b>5,839</b>	<b>5,790</b>	<b>5,817</b>
Chemical & Allied Processing	1,798	1,917	1,925	1,183	1,127	1,112	1,093	1,171	1,223	1,223
Metals Processing	1,984	2,101	2,132	2,640	2,571	2,496	2,536	2,475	2,380	2,378
Petroleum & Related Industries	455	441	436	333	345	371	371	338	348	348
Other Industrial Processes	713	711	716	537	548	544	594	600	624	635
Solvent Utilization	2	2	2	5	5	5	5	5	6	6
Storage & Transport	50	56	55	76	28	17	51	24	25	25
Waste Disposal & Recycling	1,850	1,806	1,747	1,079	1,116	1,138	1,248	1,225	1,185	1,203
<b>TRANSPORTATION</b>	<b>86,209</b>	<b>86,861</b>	<b>81,832</b>	<b>73,965</b>	<b>78,114</b>	<b>76,233</b>	<b>76,794</b>	<b>78,706</b>	<b>70,947</b>	<b>69,946</b>
On-Road Vehicles	71,250	71,081	66,050	57,848	62,074	59,859	60,202	61,833	54,106	52,944
Non-Road Sources	14,959	15,780	15,781	16,117	16,040	16,374	16,592	16,873	16,841	17,002
<b>MISCELLANEOUS</b>	<b>8,852</b>	<b>15,895</b>	<b>8,153</b>	<b>11,208</b>	<b>8,751</b>	<b>7,052</b>	<b>7,013</b>	<b>9,614</b>	<b>7,050</b>	<b>7,099</b>
Structural Fires	242	242	242	164	166	168	169	170	171	172
Agricultural Fires	483	612	571	415	413	421	415	441	465	475
Prescribed Burning	4,332	4,332	4,332	4,668	4,713	4,760	4,810	4,860	4,916	4,955
Forest Wildfires	3,795	10,709	3,009	5,928	3,430	1,674	1,586	4,114	1,469	1,469
Other	NA	NA	NA	32	28	30	34	28	28	27
<b>TOTAL ALL SOURCES</b>	<b>108,879</b>	<b>117,169</b>	<b>104,447</b>	<b>96,535</b>	<b>98,461</b>	<b>95,123</b>	<b>95,291</b>	<b>99,677</b>	<b>89,721</b>	<b>88,822</b>

**Note:** Some columns may not sum to totals due to rounding.

**Table A-3.** National Lead Emissions Estimates, 1987–1996 (short tons)

Source Category	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<b>FUEL COMBUSTION</b>	<b>510</b>	<b>511</b>	<b>505</b>	<b>500</b>	<b>495</b>	<b>491</b>	<b>495</b>	<b>494</b>	<b>487</b>	<b>493</b>
Electric Utilities	64	66	67	64	61	59	61	61	57	62
coal	48	46	46	46	46	47	49	49	50	50
oil	16	20	21	18	15	12	12	12	7	12
Industrial	22	19	18	18	18	18	19	18	16	17
coal	14	14	14	14	15	14	14	14	14	14
oil	8	5	4	3	3	4	5	4	3	3
Other	425	426	420	418	416	414	415	415	414	414
commercial/institutional coal	5	5	4	4	3	4	4	3	3	3
commercial/institutional oil	5	5	4	4	4	4	3	3	3	4
misc. fuel comb. (except res.)	400	400	400	400	400	400	400	400	400	400
residential other	14	16	12	10	9	7	8	8	8	7
<b>INDUSTRIAL PROCESSES</b>	<b>3,004</b>	<b>3,090</b>	<b>3,161</b>	<b>3,278</b>	<b>3,081</b>	<b>2,734</b>	<b>2,869</b>	<b>3,005</b>	<b>2,892</b>	<b>2,812</b>
Chemical & Allied Processing	123	136	136	136	132	93	92	96	144	117
Metals Processing	1,835	1,965	2,088	2,169	1,975	1,773	1,899	2,027	2,067	2,000
Other Industrial Processes	202	172	173	169	167	56	54	53	59	57
Waste Disposal & Recycling	844	817	765	804	807	812	824	829	622	638
<b>TRANSPORTATION</b>	<b>4,167</b>	<b>3,452</b>	<b>1,802</b>	<b>1,197</b>	<b>592</b>	<b>584</b>	<b>547</b>	<b>544</b>	<b>564</b>	<b>564</b>
On-Road Vehicles	3,317	2,567	982	421	18	18	19	19	19	19
Non-Road Sources	850	885	820	776	574	565	529	525	545	545
<b>TOTAL ALL SOURCES</b>	<b>7,681</b>	<b>7,053</b>	<b>5,468</b>	<b>4,975</b>	<b>4,168</b>	<b>3,808</b>	<b>3,911</b>	<b>4,043</b>	<b>3,943</b>	<b>3,869</b>

**Note:** Some columns may not sum to totals due to rounding.

**Table A-4.** National Nitrogen Oxides Emissions Estimates, 1987–1996 (thousand short tons)

<b>Source Category</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
<b>FUEL COMBUSTION</b>	<b>10,014</b>	<b>10,472</b>	<b>10,537</b>	<b>10,895</b>	<b>10,779</b>	<b>10,928</b>	<b>11,111</b>	<b>11,015</b>	<b>10,827</b>	<b>10,494</b>
Electric Utilities	6,246	6,545	6,593	6,663	6,519	6,504	6,651	6,565	6,384	6,034
coal	5,376	5,666	5,676	5,642	5,559	5,579	5,744	5,636	5,579	5,517
oil	217	273	285	221	212	170	180	163	96	96
gas	605	557	582	565	580	579	551	591	562	461
internal combustion	48	50	49	235	168	175	176	175	148	151
Industrial	3,063	3,187	3,209	3,035	2,979	3,071	3,151	3,147	3,144	3,170
coal	596	617	615	585	570	574	589	602	597	599
oil	292	296	294	265	237	244	245	241	247	246
gas	1,505	1,584	1,625	1,182	1,250	1,301	1,330	1,333	1,324	1,336
other	119	121	120	131	129	126	124	124	123	125
internal combustion	552	569	556	874	793	825	863	846	854	864
Other	706	740	736	1,196	1,281	1,353	1,308	1,303	1,298	1,289
commercial/institutional coal	37	39	38	40	36	38	40	40	38	38
commercial/institutional oil	121	117	106	97	88	93	93	95	103	102
commercial/institutional gas	144	157	159	200	210	225	232	237	231	234
misc. fuel comb. (except res.)	11	11	11	34	32	28	31	31	30	29
residential wood	69	74	75	46	50	53	45	44	49	48
residential other	323	343	347	780	865	916	867	857	847	838
<b>INDUSTRIAL PROCESSES</b>	<b>841</b>	<b>860</b>	<b>852</b>	<b>892</b>	<b>816</b>	<b>857</b>	<b>861</b>	<b>878</b>	<b>873</b>	<b>880</b>
Chemical & Allied Processing	255	274	273	168	165	163	155	160	158	159
Metals Processing	75	82	83	97	76	81	83	91	98	98
Petroleum & Related Industries	101	100	97	153	121	148	123	117	110	110
Other Industrial Processes	320	315	311	378	352	361	370	389	399	403
Solvent Utilization	3	3	3	1	2	3	3	3	3	3
Storage & Transport	2	2	2	3	6	5	5	5	6	6
Waste Disposal & Recycling	85	85	84	91	95	96	123	114	99	100
<b>TRANSPORTATION</b>	<b>11,598</b>	<b>12,467</b>	<b>12,374</b>	<b>11,633</b>	<b>11,891</b>	<b>12,098</b>	<b>12,285</b>	<b>12,616</b>	<b>11,998</b>	<b>11,781</b>
On-Road Vehicles	7,651	7,661	7,682	7,040	7,373	7,440	7,510	7,672	7,323	7,171
Non-Road Sources	3,947	4,806	4,693	4,593	4,518	4,658	4,776	4,944	4,675	4,610
<b>MISCELLANEOUS</b>	<b>352</b>	<b>727</b>	<b>293</b>	<b>371</b>	<b>286</b>	<b>254</b>	<b>225</b>	<b>383</b>	<b>237</b>	<b>239</b>
<b>TOTAL ALL SOURCES</b>	<b>22,806</b>	<b>24,526</b>	<b>24,057</b>	<b>23,792</b>	<b>23,772</b>	<b>24,137</b>	<b>24,482</b>	<b>24,892</b>	<b>23,935</b>	<b>23,393</b>

**Note:** Some columns may not sum to totals due to rounding.

**Table A-5.** National Volatile Organic Compounds Emissions Estimates, 1987–1996 (thousand short tons)

Source Category	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<b>FUEL COMBUSTION</b>	<b>1,283</b>	<b>1,360</b>	<b>1,372</b>	<b>1,005</b>	<b>1,075</b>	<b>1,114</b>	<b>993</b>	<b>989</b>	<b>1,073</b>	<b>1,075</b>
Electric Utilities	35	37	38	47	44	44	45	45	44	45
coal	25	27	27	27	27	27	29	29	29	31
oil	6	7	7	6	5	4	4	4	3	3
gas	2	2	2	2	2	2	2	2	2	2
internal combustion	1	1	1	12	10	10	10	10	10	10
Industrial	131	136	134	182	196	187	186	196	206	208
coal	7	7	7	7	6	7	6	8	6	6
oil	16	16	16	12	11	12	12	12	12	12
gas	57	61	61	58	60	52	51	63	73	73
other	36	36	36	51	51	49	51	50	50	51
internal combustion	15	15	15	54	68	66	66	64	65	66
Other	1,117	1,188	1,200	776	835	884	762	748	823	822
residential wood	1,085	1,155	1,169	718	776	822	698	684	759	758
other	32	33	31	58	59	62	64	63	64	64
<b>INDUSTRIAL PROCESSES</b>	<b>10,535</b>	<b>10,854</b>	<b>10,755</b>	<b>10,000</b>	<b>10,178</b>	<b>10,380</b>	<b>10,578</b>	<b>10,738</b>	<b>10,780</b>	<b>9,482</b>
Chemical & Allied Processing	923	982	980	634	710	715	701	691	660	436
Metals Processing	70	74	74	122	123	124	124	126	125	70
Petroleum & Related Industries	655	645	639	612	640	632	649	647	642	517
Other Industrial Processes	394	408	403	401	391	414	442	438	450	439
Solvent Utilization	5,743	5,945	5,964	5,750	5,782	5,901	6,016	6,162	6,183	6,273
Storage & Transport	1,801	1,842	1,753	1,495	1,532	1,583	1,600	1,629	1,652	1,312
Waste Disposal & Recycling	950	959	941	986	999	1,010	1,046	1,046	1,067	433
<b>TRANSPORTATION</b>	<b>10,721</b>	<b>10,722</b>	<b>9,613</b>	<b>8,815</b>	<b>9,003</b>	<b>8,622</b>	<b>8,684</b>	<b>9,021</b>	<b>8,135</b>	<b>7,928</b>
On-Road Vehicles	8,477	8,290	7,192	6,313	6,499	6,072	6,103	6,401	5,701	5,502
Non-Road Sources	2,244	2,432	2,422	2,502	2,503	2,551	2,581	2,619	2,433	2,426
<b>MISCELLANEOUS</b>	<b>655</b>	<b>1,230</b>	<b>642</b>	<b>1,164</b>	<b>845</b>	<b>579</b>	<b>641</b>	<b>798</b>	<b>599</b>	<b>601</b>
Other Combustion	655	1,230	641	1,064	756	485	535	710	511	516
structural fires	44	44	44	29	30	30	30	30	31	31
agricultural fires	67	85	79	48	48	49	48	51	54	55
slash/prescribed burning	182	182	182	234	236	239	241	246	252	256
forest wildfires	361	918	335	749	439	164	212	379	171	171
other	NA	NA	NA	3	3	3	3	3	3	3
Other	0	1	1	100	89	94	105	88	88	85
<b>TOTAL ALL SOURCES</b>	<b>23,194</b>	<b>24,167</b>	<b>22,383</b>	<b>20,985</b>	<b>21,100</b>	<b>20,695</b>	<b>20,895</b>	<b>21,546</b>	<b>20,586</b>	<b>19,086</b>

**Note:** Some columns may not sum to totals due to rounding.

**Table A-6.** National Particulate Matter (PM<sub>10</sub>) Emissions Estimates, 1987–1996 (thousand short tons)

Source Category	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<b>FUEL COMBUSTION</b>	<b>1,335</b>	<b>1,384</b>	<b>1,386</b>	<b>1,196</b>	<b>1,147</b>	<b>1,183</b>	<b>1,124</b>	<b>1,113</b>	<b>1,179</b>	<b>1,186</b>
Electric Utilities	284	279	274	295	257	257	279	273	268	282
coal	271	265	259	265	232	234	253	246	244	258
oil	9	10	11	9	10	7	9	8	5	5
gas	1	1	1	1	1	0	1	1	1	1
internal combustion	3	3	3	20	15	16	17	17	18	18
Industrial	239	244	243	270	233	243	257	270	302	306
coal	67	70	70	84	72	74	71	70	70	71
oil	48	48	48	52	44	45	45	44	49	50
gas	44	45	44	41	34	40	43	43	45	45
other	78	79	78	87	72	74	86	74	73	75
internal combustion	3	3	3	6	10	11	12	38	64	65
Other	812	862	869	631	657	683	588	570	610	598
residential wood	758	807	817	501	535	558	464	446	484	472
other	54	55	52	130	122	124	124	125	126	126
<b>INDUSTRIAL PROCESSES</b>	<b>1,288</b>	<b>1,294</b>	<b>1,276</b>	<b>1,306</b>	<b>1,264</b>	<b>1,269</b>	<b>1,240</b>	<b>1,219</b>	<b>1,231</b>	<b>1,232</b>
Chemical & Allied Processing	58	62	63	77	68	71	66	76	67	67
Metals Processing	194	208	211	214	251	250	181	184	212	211
Petroleum & Related Industries	62	60	58	55	43	43	38	38	40	40
Other Industrial Processes	606	601	591	583	520	506	501	495	511	510
Solvent Utilization	2	2	2	4	5	5	6	6	6	6
Storage & Transport	100	101	101	102	101	117	114	106	109	109
Waste Disposal & Recycling	265	259	251	271	276	278	334	313	287	290
<b>TRANSPORTATION</b>	<b>881</b>	<b>1,041</b>	<b>1,016</b>	<b>934</b>	<b>947</b>	<b>961</b>	<b>954</b>	<b>972</b>	<b>883</b>	<b>869</b>
On-Road Vehicles	360	369	367	336	349	343	321	320	293	274
Non-Road Sources	520	672	649	598	598	618	633	652	590	595
<b>TOTAL ALL SOURCES</b>	<b>3,504</b>	<b>3,721</b>	<b>3,678</b>	<b>3,436</b>	<b>3,358</b>	<b>3,413</b>	<b>3,318</b>	<b>3,305</b>	<b>3,293</b>	<b>3,288</b>

**Table A-7.** Miscellaneous and Natural PM<sub>10</sub> Emissions Estimates, 1987–1996 (thousand short tons)

Source Category	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<b>MISCELLANEOUS</b>	<b>37,453</b>	<b>39,444</b>	<b>37,461</b>	<b>24,419</b>	<b>24,122</b>	<b>23,865</b>	<b>24,196</b>	<b>25,461</b>	<b>22,454</b>	<b>22,702</b>
Agriculture & Forestry	7,326	7,453	7,320	5,146	5,106	4,909	4,475	4,690	4,661	4,708
Other Combustion	988	1,704	912	1,203	941	785	768	1,048	778	783
wildfires	389	1,086	300	601	332	171	152	424	145	145
managed burning	540	559	553	558	563	568	570	578	586	591
other	59	59	59	45	45	46	46	46	46	47
Cooling Towers	NA	NA	NA	0	0	0	0	0	1	1
Fugitive Dust	29,139	30,287	29,229	18,069	18,076	18,171	18,954	19,722	17,013	17,209
wind erosion	0	0	0	1	1	1	1	1	1	1
unpaved roads	11,110	12,379	11,798	11,234	11,206	10,918	11,430	11,370	10,362	10,303
paved roads	5,530	5,900	5,769	2,248	2,399	2,423	2,462	2,538	2,409	2,417
construction	12,121	11,662	11,269	4,249	4,092	4,460	4,651	5,245	3,654	3,950
other	377	346	392	336	377	369	409	569	586	538
<b>NAT. SOURCES (wind erosion)</b>	<b>1,577</b>	<b>18,110</b>	<b>12,101</b>	<b>2,092</b>	<b>2,077</b>	<b>2,227</b>	<b>509</b>	<b>2,160</b>	<b>1,146</b>	<b>5,316</b>
<b>TOTAL ALL SOURCES</b>	<b>39,030</b>	<b>57,555</b>	<b>49,562</b>	<b>26,512</b>	<b>26,199</b>	<b>26,093</b>	<b>24,706</b>	<b>27,621</b>	<b>23,599</b>	<b>28,018</b>

**Note:** Some columns may not sum to totals due to rounding.

**Table A-8.** National Sulfur Dioxide Emissions Estimates, 1987–1996 (thousand short tons)

Source Category	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<b>FUEL COMBUSTION</b>	<b>19,549</b>	<b>19,881</b>	<b>20,050</b>	<b>20,290</b>	<b>19,796</b>	<b>19,493</b>	<b>19,245</b>	<b>18,887</b>	<b>16,230</b>	<b>16,786</b>
Electric Utilities	15,819	16,110	16,340	15,909	15,784	15,416	15,189	14,889	12,080	12,604
coal	15,138	15,344	15,529	15,220	15,087	14,824	14,527	14,313	11,603	12,114
oil	651	15,344	15,529	639	652	546	612	522	413	412
gas	1	1	1	1	1	1	1	1	9	21
internal combustion	29	31	30	49	45	46	49	53	55	57
Industrial	3,068	3,111	3,086	3,550	3,256	3,292	3,284	3,218	3,357	3,399
coal	1,817	1,856	1,840	1,914	1,805	1,783	1,763	1,740	1,728	1,762
oil	807	806	812	927	779	801	809	777	912	918
gas	356	360	346	543	516	552	555	542	548	548
other	82	83	82	158	142	140	140	141	147	147
internal combustion	6	6	6	9	14	16	17	19	23	23
Other	662	660	624	831	755	784	772	780	793	782
commercial/institutional coal	164	172	169	212	184	190	193	192	200	200
commercial/institutional oil	310	295	274	425	376	396	381	391	397	389
commercial/institutional gas	2	2	2	7	7	7	8	8	8	8
misc. fuel comb. (except res.)	1	1	1	6	6	6	6	6	5	5
residential wood	10	11	11	7	7	8	6	6	7	7
other	175	180	167	175	176	177	178	177	176	173
<b>INDUSTRIAL PROCESSES</b>	<b>1,976</b>	<b>2,052</b>	<b>2,010</b>	<b>1,900</b>	<b>1,721</b>	<b>1,758</b>	<b>1,723</b>	<b>1,676</b>	<b>1,637</b>	<b>1,644</b>
Chemical & Allied Processing	425	449	440	297	280	278	269	275	286	287
Metals Processing	648	707	695	726	612	615	603	562	530	530
Petroleum & Related Industries	445	443	429	430	378	416	383	379	369	368
Other Industrial Processes	418	411	405	399	396	396	392	398	403	409
Solvent Utilization	1	1	1	0	0	1	1	1	1	1
Storage & Transport	4	5	5	7	10	9	5	2	2	2
Waste Disposal & Recycling	35	36	36	42	44	44	71	60	47	48
<b>TRANSPORTATION</b>	<b>771</b>	<b>806</b>	<b>837</b>	<b>934</b>	<b>969</b>	<b>980</b>	<b>903</b>	<b>685</b>	<b>676</b>	<b>674</b>
On-Road Vehicles	538	553	570	542	570	578	517	301	304	307
Non-Road Sources	233	253	267	392	399	402	385	384	372	368
<b>MISCELLANEOUS</b>	<b>13</b>	<b>27</b>	<b>11</b>	<b>12</b>	<b>11</b>	<b>10</b>	<b>9</b>	<b>15</b>	<b>9</b>	<b>9</b>
<b>TOTAL ALL SOURCES</b>	<b>22,308</b>	<b>22,767</b>	<b>22,907</b>	<b>23,136</b>	<b>22,496</b>	<b>22,240</b>	<b>21,879</b>	<b>21,262</b>	<b>18,552</b>	<b>19,113</b>

**Note:** Some columns may not sum to totals due to rounding.

**Table A-9.** National Long-Term Air Quality Trends, 1977–1996

Year	CO 2nd Max. 8hr. ppm	Pb Max. Qtr. µg/m <sup>3</sup>	NO <sub>2</sub> Arith. Mean ppm	Ozone 2nd Max. 1hr. ppm	PM <sub>10</sub> Wtd. Arith. Mean µg/m <sup>3</sup>	SO <sub>2</sub> Arith. Mean ppm
<b>1977-86</b> <b>(168 sites)</b> <b>(122 sites)</b> <b>(65 sites)</b> <b>(238 sites)</b> — <b>(278 sites)</b>						
1977	10.9	1.35	0.026	0.152	—	0.0133
1978	10.5	1.26	0.027	0.156	—	0.0128
1979	10.1	1.06	0.026	0.141	—	0.0125
1980	9.3	0.73	0.024	0.143	—	0.0112
1981	8.9	0.59	0.023	0.131	—	0.0108
1982	8.2	0.50	0.022	0.127	—	0.0100
1983	8.2	0.40	0.022	0.144	—	0.0098
1984	8.1	0.36	0.023	0.128	—	0.0099
1985	7.3	0.25	0.023	0.127	—	0.0092
1986	7.3	0.16	0.022	0.122	—	0.0091
<b>1987-96</b> <b>(345 sites)</b> <b>(208 sites)</b> <b>(214 sites)</b> <b>(600 sites)</b> <b>(900 sites)</b> <b>(479 sites)</b>						
1987	6.7	0.16	0.021	0.124	—	0.0089
1988	6.4	0.12	0.022	0.133	32.2	0.0089
1989	6.4	0.09	0.021	0.116	32.0	0.0087
1990	5.9	0.09	0.020	0.113	29.4	0.0081
1991	5.6	0.07	0.020	0.114	29.1	0.0078
1992	5.2	0.06	0.019	0.106	26.8	0.0073
1993	4.9	0.05	0.019	0.108	26.0	0.0071
1994	5.1	0.04	0.020	0.108	26.2	0.0068
1995	4.5	0.04	0.019	0.113	25.1	0.0056
1996	4.2	0.04	0.019	0.106	24.2	0.0056

**Table A-10.** National Air Quality Trends Statistics by Monitoring Location, 1987–1996

Statistic	Units	# of Sites	Location	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<b>Carbon Monoxide</b>													
2nd Max. 8hr.	ppm	10	Rural	3.5	3.1	2.8	2.6	2.4	2.4	2.1	2.3	2.2	1.9
"	"	142	Suburban	6.3	6.0	6.0	5.5	5.2	4.9	4.8	4.9	4.3	4.0
"	"	190	Urban	7.2	6.9	6.8	6.3	6.0	5.5	5.1	5.4	4.8	4.5
<b>Lead</b>													
Max. Qtr.	ug/m <sup>3</sup>	5	Rural	0.08	0.06	0.05	0.05	0.05	0.04	0.04	0.02	0.03	0.02
"	"	107	Suburban	0.13	0.09	0.08	0.07	0.06	0.05	0.04	0.04	0.04	0.03
"	"	96	Urban	0.19	0.15	0.10	0.11	0.07	0.06	0.06	0.05	0.05	0.05
<b>Nitrogen Dioxide</b>													
Arith. Mean	ppm	46	Rural	0.008	0.009	0.008	0.008	0.008	0.008	0.007	0.008	0.007	0.007
"	"	89	Suburban	0.023	0.023	0.023	0.022	0.022	0.021	0.020	0.021	0.020	0.020
"	"	77	Urban	0.027	0.027	0.027	0.025	0.025	0.024	0.024	0.025	0.024	0.024
<b>Ozone</b>													
2nd Max. 1hr.	ppm	194	Rural	0.115	0.124	0.110	0.109	0.107	0.102	0.104	0.103	0.108	0.104
"	"	276	Suburban	0.129	0.140	0.119	0.116	0.119	0.110	0.112	0.112	0.117	0.108
"	"	113	Urban	0.127	0.134	0.115	0.111	0.112	0.104	0.105	0.106	0.110	0.106
<b>PM<sub>10</sub></b>													
Wtd. Arith. Mean	ug/m <sup>3</sup>	119	Rural	—	25.3	25.5	23.9	22.8	21.4	19.9	20.2	19.3	19.3
"	"	356	Suburban	—	33.3	32.9	30.3	29.9	27.7	27.0	27.0	26.1	24.9
"	"	404	Urban	—	33.4	33.1	30.4	30.4	27.8	27.2	27.3	26.0	25.2
<b>Sulfur Dioxide</b>													
Arith. Mean	ppm	138	Rural	0.0073	0.0073	0.0071	0.0067	0.0065	0.0063	0.0063	0.0060	0.0054	0.0052
"	"	191	Suburban	0.0094	0.0095	0.0091	0.0085	0.0082	0.0077	0.0075	0.0071	0.0057	0.0058
"	"	139	Urban	0.0099	0.0101	0.0099	0.0090	0.0086	0.0079	0.0076	0.0075	0.0059	0.0058

**Table A-11.** Maximum Air Quality Concentrations by County, 1996

State	County	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> 24-hr (ppm)
AL	CALHOUN	116,034	.	.	.	0.102	31	.
AL	CLAY	13,252	.	.	.	.	46	0.019
AL	COLBERT	51,666	.	.	.	.	45	.
AL	DE KALB	54,651	.	.	.	.	45	.
AL	ELMORE	49,210	.	.	.	0.102	.	.
AL	ESCAMBIA	35,518	.	.	.	.	41	.
AL	ETOWAH	99,840	.	0.26	.	.	50	.
AL	FRANKLIN	27,814	.	.	.	.	45	.
AL	GENEVA	23,647	.	.	.	0.077	.	.
AL	HOUSTON	81,331	.	.	.	.	54	.
AL	JACKSON	47,796	.	.	.	.	33	0.027
AL	JEFFERSON	651,525	5.7	0.13	.	0.141	100	0.015
AL	LAWRENCE	31,513	.	.	.	0.096	.	.
AL	LIMESTONE	54,135	.	.	.	.	43	.
AL	MADISON	238,912	3	.	.	0.102	54	.
AL	MARENGO	23,084	.	.	.	.	52	.
AL	MOBILE	378,643	.	.	.	0.104	91	0.07
AL	MONTGOMERY	209,085	1.5	.	0.01	0.091	39	0.022
AL	MORGAN	100,043	.	.	.	0.114	45	0.001
AL	PIKE	27,595	.	0.79	.	.	45	.
AL	RUSSELL	46,860	.	.	.	.	38	.
AL	SHELBY	99,358	.	.	0.01	0.127	42	.
AL	SUMTER	16,174	.	.	.	0.08	.	.
AL	TALLADEGA	74,107	.	.	.	.	53	.
AL	TUSCALOOSA	150,522	.	.	.	.	58	.
AL	WALKER	67,670	.	.	.	.	46	.
AK	ANCHORAGE BOROUGH	226,338	10.5	.	.	.	133	.
AK	FAIRBANKS NORTH STAR BOROUGH	77,720	8.6	.	.	.	.	.
AK	JUNEAU BOROUGH	26,751	.	.	.	.	79	.
AK	YUKON-KOYUKUK CA	8,478	.	.	.	0.057	.	.
AZ	COCHISE	97,624	.	.	.	0.079	69	.
AZ	COCONINO	96,591	.	.	.	0.082	31	.
AZ	GILA	40,216	.	.	.	.	66	.
AZ	GRAHAM	26,554	.	.	.	.	84	.
AZ	MARICOPA	2,122,101	10	0.05	0.0316	0.122	130	0.017
AZ	NAVAJO	77,658	.	.	.	.	28	.
AZ	PIMA	666,880	5.1	0.05	0.019	0.092	81	0.004
AZ	PINAL	116,379	.	.	.	.	0.02	.
AZ	SANTA CRUZ	29,676	.	.	.	.	88	.
AZ	YAVAPAI	107,714	.	.	.	.	22	.
AZ	YUMA	106,895	.	.	.	0.098	59	.
AR	ARKANSAS	21,653	.	.	.	.	70	.
AR	ASHLEY	24,319	.	.	.	.	55	.
AR	CRAIGHEAD	68,956	.	.	.	.	53	.
AR	CRITTENDEN	49,939	.	.	.	0.114	58	.
AR	GARLAND	73,397	.	.	.	.	40	.
AR	JEFFERSON	85,487	.	.	.	.	51	.
AR	MARION	12,001	.	.	.	.	51	.
AR	MILLER	38,467	.	.	.	.	50	.
AR	MONTGOMERY	7,841	.	.	.	0.07	.	.
AR	NEWTON	7,666	.	.	.	0.08	.	.
AR	OUACHITA	30,574	.	.	.	.	45	.
AR	PHILLIPS	28,838	.	.	.	.	64	.
AR	POLK	17,347	.	.	.	.	47	.
AR	POPE	45,883	.	.	.	.	46	.
AR	PULASKI	349,660	3.8	0	0.0108	0.102	52	0.009
AR	SEBASTIAN	99,590	.	.	.	.	47	.
AR	UNION	46,719	.	.	.	.	47	0.023
AR	WASHINGTON	113,409	.	.	.	.	48	.
AR	WHITE	54,676	.	.	.	.	49	.
CA	ALAMEDA	1,279,182	3.8	0	0.0218	0.137	44	.
CA	AMADOR	30,039	1.4	.	.	0.127	.	.
CA	BUTTE	182,120	5.3	0	0.013	0.096	62	.
CA	CALAVERAS	31,998	0.8	.	.	0.13	33	.
CA	COLUSA	16,275	.	.	.	0.101	73	.
CA	CONTRA COSTA	803,732	2.7	0.02	0.0172	0.117	45	.
CA	DEL NORTE	23,460	.	.	.	.	40	.
CA	EL DORADO	125,995	4.8	.	0.0107	0.13	64	.
CA	FRESNO	667,490	6.7	0	0.0214	0.151	101	0.008
CA	GLENN	24,798	.	.	.	0.092	79	.
CA	HUMBOLDT	119,118	.	0	.	.	56	.
CA	IMPERIAL	109,303	14.1	0.05	0.0143	0.143	440	0.013

**Table A-11.** Maximum Air Quality Concentrations by County, 1996 (continued)

State	County	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> 24-hr (ppm)
CA	INYO	18,281	.	.	0.091	221	.	.
CA	KERN	543,477	5.6	0	0.163	110	.	0.009
CA	KINGS	101,469	.	.	0.139	138	.	.
CA	LAKE	50,631	.	.	0.08	20	.	.
CA	LASSEN	27,598	.	.	.	35	.	.
CA	LOS ANGELES	8,863,164	14.5	0.06	0.0481	0.197	109	.
CA	MADERA	88,090	.	.	0.128	68	.	.
CA	MARIN	230,096	3.4	.	0.095	47	.	.
CA	MARIPOSA	14,302	.	.	0.11	96	.	.
CA	MENDOCINO	80,345	2.4	.	0.055	49	.	.
CA	MERCED	178,403	.	.	0.124	57	.	.
CA	MODOC	9,678	.	.	.	53	.	.
CA	MONO	9,956	3	.	0.09	81	.	.
CA	MONTEREY	355,660	2.4	.	0.091	40	.	.
CA	NAPA	110,765	3.8	.	0.089	39	.	.
CA	NEVADA	78,510	.	.	0.111	86	.	.
CA	ORANGE	2,410,556	6.6	.	0.144	77	0.004	.
CA	PLACER	172,796	2.3	0	0.131	45	.	.
CA	PLUMAS	19,739	.	.	0.09	61	.	.
CA	RIVERSIDE	1,170,413	5	0.04	0.0286	0.182	155	0.004
CA	SACRAMENTO	1,041,219	7.1	0.01	0.022	0.138	80	0.005
CA	SAN BENITO	36,697	.	.	0.118	35	.	.
CA	SAN BERNARDINO	1,418,380	6.6	0.04	0.0383	0.215	123	.
CA	SAN DIEGO	2,498,016	6	0.02	0.0218	0.133	92	.
CA	SAN FRANCISCO	723,959	5.1	0.01	0.0215	0.061	59	.
CA	SAN JOAQUIN	480,628	6.7	0	0.0232	0.126	61	.
CA	SAN LUIS OBISPO	217,162	2.3	.	0.0125	0.109	.	.
CA	SAN MATEO	649,623	3.4	.	0.0196	0.091	45	.
CA	SANTA BARBARA	369,608	4.5	0	0.0191	0.13	63	.
CA	SANTA CLARA	1,497,577	5.8	0.01	0.0251	0.115	68	.
CA	SANTA CRUZ	229,734	0.7	.	0.0054	0.102	69	.
CA	SHASTA	147,036	.	.	0.11	50	.	.
CA	SIERRA	3,318	.	.	.	114	.	.
CA	SISKIYOU	43,531	.	.	0.07	35	.	.
CA	SOLANO	340,421	4.5	.	0.117	43	.	0.006
CA	SONOMA	388,222	3	.	0.085	39	.	.
CA	STANISLAUS	370,522	5.6	0	0.0219	0.125	83	.
CA	SUTTER	64,415	4.1	.	0.0123	0.108	69	.
CA	TEHAMA	49,625	.	.	0.09	49	.	.
CA	TRINITY	13,063	.	.	.	63	.	.
CA	TULARE	311,921	3.9	.	0.139	87	.	.
CA	TUOLUMNE	48,456	2.5	.	0.117	.	.	.
CA	VENTURA	669,016	3.3	0	0.144	79	.	0.003
CA	YOLO	141,092	1.3	.	0.113	65	.	.
CO	ADAMS	265,038	3.9	0.05	0.0215	0.089	96	0.015
CO	ALAMOSA	13,617	.	.	.	92	.	.
CO	ARAPAHOE	391,511	2.6	.	0.0316	0.103	.	.
CO	ARCHULETA	5,345	.	.	.	85	.	.
CO	BOULDER	225,339	5.5	.	0.092	59	.	.
CO	DELTA	20,980	.	.	.	67	.	.
CO	DENVER	467,610	7.3	0.05	0.0331	0.092	70	0.024
CO	DOUGLAS	60,391	.	.	0.102	26	.	.
CO	EAGLE	21,928	.	.	.	52	.	.
CO	EL PASO	397,014	5	0.01	0.077	76	.	.
CO	FREMONT	32,273	.	.	.	37	.	.
CO	GARFIELD	29,974	.	.	.	78	.	.
CO	GUNNISON	10,273	.	.	0.086	91	.	.
CO	JEFFERSON	438,430	4.3	.	0.107	39	.	.
CO	LAKE	6,007	.	0.04	.	.	.	.
CO	LA PLATA	32,284	.	.	.	92	.	.
CO	LARIME	186,136	5.1	.	0.093	52	.	.
CO	MESA	93,145	5.8	.	.	63	.	.
CO	MONTEZUMA	18,672	.	0.01	0.077	.	.	.
CO	MONTROSE	24,423	.	.	.	60	.	.
CO	PITKIN	12,661	.	.	.	66	.	.
CO	PROWERS	13,347	.	.	.	80	.	.
CO	PUEBLO	123,051	.	.	.	49	.	.
CO	ROUTT	14,088	.	.	.	137	.	.
CO	SAN MIGUEL	3,653	.	.	.	105	.	.
CO	SUMMIT	12,881	.	.	.	56	.	.
CO	TELLER	12,468	.	.	.	195	.	.
CO	WELD	131,821	7	.	0.097	56	.	.

**Table A-11.** Maximum Air Quality Concentrations by County, 1996 (continued)

State	County	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> 24-hr (ppm)
CT	FAIRFIELD	827,645	4.1	0.02	0.0235	0.126	65	0.026
CT	HARTFORD	851,783	4.5	0.03	0.0161	0.091	49	0.022
CT	LITCHFIELD	174,092	.	.	.	0.112	50	.
CT	MIDDLESEX	143,196	.	.	.	0.102	38	.
CT	NEW HAVEN	804,219	2.9	0.05	0.026	0.12	109	.
CT	NEW LONDON	254,957	.	.	.	0.121	56	.
CT	TOLLAND	128,699	.	.	0.006	0.101	.	0.013
CT	WINDHAM	102,525	.	.	.	.	35	.
DE	KENT	110,993	.	.	.	0.11	.	.
DE	NEW CASTLE	441,946	3.6	.	0.019	0.108	81	.
DE	SUSSEX	113,229	.	.	.	0.109	50	0.023
DC	WASHINGTON	606,900	4.5	0.02	0.0264	0.11	49	0.025
FL	ALACHUA	181,596	.	.	.	.	44	.
FL	BAY	126,994	.	.	.	.	50	.
FL	BREVARD	398,978	.	.	.	0.087	44	.
FL	BROWARD	1,255,488	4.4	0.05	0.0095	0.103	48	0.008
FL	CALHOUN	11,011	.	.	.	0.08	.	.
FL	COLLIER	152,099	.	.	.	.	45	.
FL	DADE	1,937,094	4.6	0.01	0.016	0.097	62	0.005
FL	DUVAL	672,971	3.8	0.02	0.0149	0.096	53	0.024
FL	ESCAMBIA	262,798	.	.	.	0.098	37	0.033
FL	GULF	11,504	.	.	.	.	47	.
FL	HAMILTON	10,930	.	.	.	.	62	0.019
FL	HILLSBOROUGH	834,054	3.9	2.81	0.0098	0.113	81	0.087
FL	LEE	335,113	.	.	.	0.08	38	.
FL	LEON	192,493	.	.	.	0.087	33	.
FL	MANATEE	211,707	.	.	.	0.091	48	.
FL	MARTIN	100,900	.	.	.	.	42	.
FL	NASSAU	43,941	.	.	.	.	61	0.03
FL	ORANGE	677,491	4.1	0	0.0126	0.104	67	0.008
FL	OSCEOLA	107,728	.	.	.	0.096	.	.
FL	PALM BEACH	863,518	3.6	0	0.012	0.09	56	.
FL	PASCO	281,131	.	.	.	0.086	.	.
FL	PINELLAS	851,659	2.8	0	0.0112	0.092	50	0.033
FL	POLK	405,382	.	.	.	0.092	45	0.021
FL	PUTNAM	65,070	.	.	.	.	45	0.019
FL	ST JOHNS	83,829	.	.	.	0.09	.	.
FL	ST LUCIE	150,171	.	.	.	0.072	.	.
FL	SARASOTA	277,776	5.1	.	.	0.094	73	0.018
FL	SEMINOLE	287,529	.	.	.	0.092	49	.
FL	VOLUSIA	370,712	.	.	.	0.085	63	.
GA	BARTOW	55,911	.	.	.	.	.	0.014
GA	BIBB	149,967	.	.	.	.	34	.
GA	CHATHAM	216,935	.	.	.	0.085	.	0.03
GA	CHATTOOGA	22,242	.	.	.	.	51	.
GA	DE KALB	545,837	3.7	0.02	0.0175	0.13	56	.
GA	DOUGHERTY	96,311	.	.	.	.	21	.
GA	ELBERT	18,949	.	.	.	.	48	.
GA	FANNIN	15,992	.	.	.	0.091	.	0.033
GA	FLOYD	81,251	.	.	.	.	.	0.016
GA	FULTON	648,951	3.8	0.03	0.0266	0.137	60	0.022
GA	GLYNN	62,496	.	.	.	0.086	30	.
GA	GWINNETT	352,910	.	.	.	0.109	.	.
GA	MUSCOGEE	179,278	.	0.65	.	0.095	58	.
GA	PAULDING	41,611	.	.	0.0052	0.114	.	.
GA	RICHMOND	189,719	.	.	.	0.099	44	.
GA	ROCKDALE	54,091	.	.	0.0059	0.123	.	.
GA	SPALDING	54,457	.	.	.	.	48	.
GA	WASHINGTON	19,112	.	.	.	.	59	.
HI	HONOLULU	836,231	3	0.03	0.0031	0.047	29	0.009
HI	KAUAI	51,177	.	.	.	.	36	.
ID	ADA	205,775	5	.	0.0228	.	90	.
ID	BANNOCK	66,026	.	.	0.0144	.	89	0.03
ID	BLAINE	13,552	.	.	.	.	52	.
ID	BONNER	26,622	.	.	.	.	78	.
ID	BONNEVILLE	72,207	.	.	.	.	76	.
ID	BUTTE	2,918	.	.	.	0.081	.	.
ID	CANYON	90,076	.	.	.	.	74	.
ID	CARIBOU	6,963	.	.	.	.	72	.
ID	KOOTENAI	69,795	.	.	.	.	76	.
ID	LEMHI	6,899	.	.	.	.	100	.
ID	LEWIS	3,516	.	.	.	.	63	.

**Table A-11.** Maximum Air Quality Concentrations by County, 1996 (continued)

State	County	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> 24-hr (ppm)
ID	MADISON	23,674	.	.	.	.	67	.
ID	MINIDOKA	19,361	.	.	.	.	62	.
ID	NEZ PERCE	33,754	5.9	.	.	.	63	.
ID	SHOSHONE	13,931	.	0.1	.	.	101	.
ID	TWIN FALLS	53,580	.	.	.	.	64	.
IL	ADAMS	66,090	.	.	.	0.099	41	0.03
IL	CHAMPAIGN	173,025	.	.	.	0.094	39	0.013
IL	COLES	51,644	.	.	.	.	44	.
IL	COOK	5,105,067	4.9	0.54	0.032	0.117	122	0.032
IL	DU PAGE	781,666	.	0.05	.	0.087	56	.
IL	EFFINGHAM	31,704	.	.	.	0.097	.	.
IL	JACKSON	61,067	.	.	.	.	37	.
IL	JERSEY	20,539	.	.	.	0.102	.	.
IL	KANE	317,471	.	.	.	0.096	.	.
IL	LAKE	516,418	.	.	0.008	0.125	.	.
IL	LA SALLE	106,913	.	.	.	.	111	.
IL	MC HENRY	183,241	.	.	.	0.094	.	.
IL	MACON	117,206	.	0.02	.	0.1	53	0.022
IL	MACOUPIN	47,679	0.7	0.01	.	0.102	39	0.012
IL	MADISON	249,238	2.5	3.1	.	0.127	107	0.102
IL	PEORIA	182,827	4.6	0.02	.	0.091	43	0.047
IL	RANDOLPH	34,583	.	.	.	0.093	89	0.06
IL	ROCK ISLAND	148,723	.	0.02	.	0.081	48	.
IL	ST CLAIR	262,852	.	0.11	0.0202	0.089	63	.
IL	SANGAMON	178,386	3	.	.	0.098	26	0.061
IL	TAZEWELL	123,692	.	.	.	.	44	.
IL	WABASH	13,111	.	.	.	.	44	0.043
IL	WILL	357,313	0.9	0.02	0.009	0.093	47	0.023
IL	WINNEBAGO	252,913	3.2	0.05	.	0.089	36	.
IN	ALLEN	300,836	2.7	0.02	.	0.105	70	.
IN	CLARK	87,777	.	.	.	0.098	54	.
IN	DAVIESS	27,533	.	.	.	.	0.05	.
IN	DEARBORN	38,835	.	.	.	.	0.045	.
IN	DE KALB	35,324	0.7	0	0.0074	0.082	80	.
IN	DELAWARE	119,659	.	0.94	.	.	.	.
IN	DUBOIS	36,616	.	.	.	.	52	.
IN	ELKHART	156,198	.	.	.	0.115	.	.
IN	FLOYD	64,404	.	.	.	0.119	.	0.038
IN	FOUNTAIN	17,808	.	.	.	.	0.037	.
IN	GIBSON	31,913	.	.	.	.	0.076	.
IN	HAMILTON	108,936	.	.	.	0.116	.	.
IN	HANCOCK	45,527	.	.	.	0.12	.	.
IN	JASPER	24,960	.	.	.	.	41	0.012
IN	JEFFERSON	29,797	.	.	.	.	.	0.013
IN	KNOX	39,884	.	.	.	0.103	.	.
IN	LAKE	475,594	3.7	0.21	0.0208	0.113	95	0.031
IN	LA PORTE	107,066	.	.	.	0.128	.	.
IN	MADISON	130,669	.	.	.	0.121	46	.
IN	MARION	797,159	3.1	0.16	0.0179	0.121	71	0.041
IN	MORGAN	55,920	.	.	.	.	0.027	.
IN	PIKE	12,509	.	.	.	.	0.054	.
IN	PORTER	128,932	.	.	.	0.132	208	0.026
IN	POSEY	25,968	.	.	.	0.064	.	0.04
IN	ST JOSEPH	247,052	2.5	.	0.0155	0.11	45	.
IN	SPENCER	19,490	.	.	.	.	0.03	.
IN	SULLIVAN	18,993	.	.	.	.	0.022	.
IN	TIPPECANOE	130,598	1.1	.	0.0126	.	34	0.02
IN	VANDERBURGH	165,058	4.1	.	0.0117	0.105	45	0.04
IN	VERMILLION	16,773	.	.	.	.	44	.
IN	VIGO	106,107	2.6	.	.	0.112	53	0.039
IN	WARRICK	44,920	.	.	.	0.115	.	0.097
IN	WAYNE	71,951	.	.	.	.	.	0.036
IA	BLACK HAWK	123,798	.	.	.	.	59	.
IA	CERRO GORDO	46,733	.	.	.	.	151	.
IA	CLINTON	51,040	.	.	.	.	78	0.042
IA	DELAWARE	18,035	.	.	.	.	45	.
IA	DUBUQUE	86,403	.	.	.	.	.	0.022
IA	EMMET	11,569	.	.	.	.	39	.
IA	LEE	38,687	.	.	.	.	.	0.045
IA	LINN	168,767	7.8	.	.	0.073	65	0.2
IA	MUSCATINE	39,907	.	.	.	.	72	0.086
IA	POLK	327,140	4	.	.	0.082	130	.

**Table A-11.** Maximum Air Quality Concentrations by County, 1996 (continued)

State	County	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> 24-hr (ppm)
IA	POTTAWATTAMIE	82,628	.	0.37	.	0.09	153	0.024
IA	SCOTT	150,979	.	.	.	49	.	.
IA	UNION	12,750	.	.	.	.	.	.
IA	VAN BUREN	7,676	.	.	.	0.082	95	.
IA	WOODBURY	98,276	.	.	.	.	.	.
KS	CLOUD	11,023	.	0.01	.	.	48	.
KS	FORD	27,463	.	0.01	.	.	48	.
KS	GREELEY	1,774	.	0.01	.	.	102	.
KS	JOHNSON	355,054	.	0.01	.	.	67	.
KS	KEARNEY	4,027	.	.	.	.	69	.
KS	MIAMI	23,466	.	.	.	0.1	.	.
KS	MORTON	3,480	.	0.01	.	.	81	.
KS	PAWNEE	7,555	0.3	.	.	0.08	.	0.001
KS	SEDWICK	403,662	6.4	0.02	.	0.095	119	0.007
KS	SHAWNEE	160,976	.	0.01	.	.	58	.
KS	SHERMAN	6,926	0.3	0.01	.	0.05	74	0.001
KS	WYANDOTTE	161,993	2.7	0.07	0.0216	0.106	120	0.057
KY	BELL	31,506	3.5	.	.	0.092	47	.
KY	BOONE	57,589	.	.	.	0.101	.	.
KY	BOYD	51,150	3.7	.	0.013	0.102	86	0.057
KY	BULLITT	47,567	.	.	0.0133	0.11	49	.
KY	CAMPBELL	83,866	.	.	0.0185	0.115	62	0.029
KY	CHRISTIAN	68,941	.	.	.	0.1	39	0.019
KY	DAVIESS	87,189	2.7	.	0.0114	0.107	59	0.02
KY	EDMONSON	10,357	.	.	.	0.107	.	.
KY	FAYETTE	225,366	3.1	.	0.0137	0.096	60	0.02
KY	FLOYD	43,586	.	.	.	.	50	.
KY	GRAVES	33,550	.	.	.	0.086	.	.
KY	GREENUP	36,742	.	0.02	.	0.097	.	0.023
KY	HANCOCK	7,864	.	.	.	0.11	.	0.025
KY	HARDIN	89,240	.	.	.	0.093	49	.
KY	HARLAN	36,574	.	.	.	.	51	.
KY	HENDERSON	43,044	2	.	0.0173	0.108	59	0.041
KY	JEFFERSON	664,937	5.6	0.02	0.0202	0.121	61	0.03
KY	JESSAMINE	30,508	.	.	.	0.082	.	.
KY	KENTON	142,031	3.3	.	0.0192	0.112	56	.
KY	LAWRENCE	13,998	.	.	.	0.082	54	0
KY	LIVINGSTON	9,062	.	.	.	0.105	51	0.021
KY	MC CRACKEN	62,879	3.2	.	0.0116	0.087	61	.
KY	MC LEAN	9,628	.	.	.	0.094	.	.
KY	MADISON	57,508	.	.	.	.	53	.
KY	MARSHALL	27,205	.	.	.	.	54	.
KY	OLDHAM	33,263	.	.	.	0.109	.	.
KY	PERRY	30,283	.	.	.	0.09	43	.
KY	PIKE	72,583	.	.	.	0.087	37	.
KY	PULASKI	49,489	.	.	.	0.083	55	.
KY	SCOTT	23,867	.	.	.	0.095	.	.
KY	SIMPSON	15,145	.	.	0.0141	0.094	.	.
KY	TRIGG	10,361	.	.	.	0.101	.	.
KY	WARREN	76,673	.	.	.	.	46	.
KY	WHITEY	33,326	.	.	.	.	44	.
KY	WOODFORD	19,955	.	0.04	.	.	.	.
LA	ASCENSION PARISH	58,214	.	.	.	0.121	.	.
LA	BEAUREGARD PARISH	30,083	.	.	0.0054	0.092	.	.
LA	BOSSIER PARISH	86,088	.	.	.	0.096	44	0.004
LA	CADDY PARISH	248,253	.	.	.	0.1	47	.
LA	CALCASIEU PARISH	168,134	.	.	0.0056	0.101	33	0.018
LA	EAST BATON ROUGE PARISH	380,105	4.7	0.15	0.0208	0.118	.	.
LA	GRANT PARISH	17,526	.	.	.	0.085	.	.
LA	IBERVILLE PARISH	31,049	.	.	0.0105	0.139	42	.
LA	JEFFERSON PARISH	448,306	.	.	0.0118	0.1	.	.
LA	LAFAYETTE PARISH	164,762	.	.	.	0.098	25	.
LA	LAFOURCHE PARISH	85,860	.	.	.	0.094	.	.
LA	LIVINGSTON PARISH	70,526	.	.	0.0051	0.116	.	.
LA	ORLEANS PARISH	496,938	4	0.02	0.0178	0.091	44	.
LA	OUACHITA PARISH	142,191	.	.	.	0.089	76	0.007
LA	POINTE COUPEE PARISH	22,540	.	.	0.0068	0.102	.	.
LA	RAPIDES PARISH	131,556	.	.	.	.	42	.
LA	ST BERNARD PARISH	66,631	.	.	.	0.105	.	.
LA	ST CHARLES PARISH	42,437	.	.	.	0.102	64	.
LA	ST JAMES PARISH	20,879	.	.	0.0133	0.113	.	.
LA	ST JOHN THE BAPTIST PARISH	39,996	.	0.09	.	.	.	.

**Table A-11.** Maximum Air Quality Concentrations by County, 1996 (continued)

State	County	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> 24-hr (ppm)
LA	ST MARY PARISH	58,086	.	.	0.092	.	.	.
LA	WEST BATON ROUGE PARISH	19,419	.	0.03	0.0153	0.114	.	.
ME	ANDROSCOGGIN	105,259	.	.	.	.	37	0.018
ME	AROSTOOK	86,936	.	.	.	.	104	0.04
ME	CUMBERLAND	243,135	.	.	0.1	61	.	0.021
ME	FRANKLIN	29,008	.	.	.	.	39	.
ME	HANCOCK	46,948	.	.	0.001	0.1	51	.
ME	KENNEBEC	115,904	.	.	0.096	64	.	.
ME	KNOX	36,310	.	.	0.104	39	.	.
ME	OXFORD	52,602	.	.	0.079	41	.	0.013
ME	PENOBSQUIT	146,601	.	.	0.082	70	.	0.02
ME	PISCATAQUIS	18,653	.	.	0.07	.	.	.
ME	SAGADAHOC	33,535	.	.	0.108	.	.	.
ME	SOMERSET	49,767	.	.	0.093	26	.	.
ME	YORK	164,587	.	.	0.0106	0.104	37	.
MD	ALLEGANY	74,946	.	.	.	.	47	0.019
MD	ANNE ARUNDEL	427,239	.	.	0.126	44	.	.
MD	BALTIMORE	692,134	3	.	0.019	0.122	44	.
MD	CALVERT	51,372	.	.	0.094	.	.	.
MD	CARROLL	123,372	.	.	0.113	.	.	.
MD	CECIL	71,347	.	.	0.119	41	.	.
MD	CHARLES	101,154	.	.	0.099	.	.	.
MD	GARRETT	28,138	.	.	.	.	61	.
MD	HARFORD	182,132	.	.	0.0092	0.131	.	.
MD	KENT	17,842	.	.	0.107	.	.	.
MD	MONTGOMERY	757,027	3	.	0.108	.	.	.
MD	PRINCE GEORGES	729,268	4.5	.	0.116	50	.	.
MD	WICOMICO	74,339	.	.	.	.	34	.
MD	BALTIMORE	736,014	4.2	0.03	0.0269	0.108	75	0.024
MA	BARNSTABLE	186,605	.	.	0.124	.	.	.
MA	BERKSHIRE	139,352	.	.	0.108	.	.	.
MA	BRISTOL	506,325	.	.	0.0075	0.118	44	0.043
MA	ESSEX	670,080	.	.	0.0157	0.105	34	0.027
MA	HAMPDEN	456,310	7.7	.	0.0238	0.108	67	0.028
MA	HAMPSHIRE	146,568	.	.	0.0074	0.11	40	0.017
MA	MIDDLESEX	1,398,468	4.5	.	0.102	51	.	0.032
MA	NORFOLK	616,087	.	.	.	.	55	.
MA	PLYMOUTH	435,276	.	.	0.088	.	.	.
MA	SUFFOLK	663,906	4.7	.	0.031	0.089	80	0.037
MA	WORCESTER	709,705	5.3	.	0.0193	0.091	46	0.021
MI	ALLEGAN	90,509	.	.	0.0091	0.123	.	.
MI	BENZIE	12,200	.	.	.	0.108	.	.
MI	BERRIEN	161,378	.	.	.	0.125	.	.
MI	CALHOUN	135,982	.	.	.	.	57	.
MI	CASS	49,477	.	.	.	0.115	.	.
MI	CLINTON	57,883	.	.	.	0.077	.	.
MI	DELTA	37,780	.	.	.	.	.	0.011
MI	GENESEE	430,459	.	0.01	.	0.113	45	0.012
MI	HURON	34,951	.	.	.	0.098	.	.
MI	INGHAM	281,912	.	.	.	0.096	.	.
MI	KALAMAZOO	223,411	1.5	0.01	0.0114	0.102	33	0.011
MI	KENT	500,631	3.3	0.01	.	0.127	71	0.011
MI	LENAWEE	91,476	.	.	.	0.104	.	.
MI	MACOMB	717,400	2.8	.	0.012	0.108	.	0.022
MI	MARQUETTE	70,887	.	.	.	.	78	.
MI	MASON	25,537	.	.	.	0.128	.	.
MI	MECOSTA	37,308	.	.	.	0.11	.	.
MI	MONROE	133,600	.	.	.	.	45	.
MI	MUSKEGON	158,983	.	0.01	.	0.123	.	.
MI	OAKLAND	1,083,592	2.6	.	.	0.09	.	.
MI	OTTAWA	187,768	.	.	.	0.113	.	.
MI	ROSCOMMON	19,776	.	.	.	0.099	.	.
MI	ST CLAIR	145,607	.	.	.	0.113	.	.
MI	VAN BUREN	70,060	.	0.01	0.0083	.	.	.
MI	WASHTENAW	282,937	.	.	.	0.099	.	.
MI	WAYNE	2,111,687	6.2	0.04	0.0214	0.098	106	0.079
MN	ANOKA	243,641	.	.	.	0.078	.	.
MN	CARLTON	29,259	.	.	.	.	27	.
MN	DAKOTA	275,227	1.1	0.55	0.0157	0.081	.	0.024
MN	DOUGLAS	28,674	.	.	.	.	6	.
MN	GOODHUE	40,690	.	.	.	.	19	.
MN	HENNEPIN	1,032,431	4.7	0.01	0.0281	.	91	0.013

**Table A-11.** Maximum Air Quality Concentrations by County, 1996 (continued)

State	County	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> 24-hr (ppm)
MN	KOOCHICHING	16,299	.	.	.	0.074	22	0.011
MN	LAKE	10,415	.	.	.	0.074	.	.
MN	MORRISON	29,604	.	.	.	.	24	.
MN	OLMSTED	106,470	.	.	.	.	44	0.016
MN	PINE	21,264	.	.	.	.	13	.
MN	PIPESTONE	10,491	.	.	.	.	21	.
MN	RAMSEY	485,765	7.3	0.01	0.0193	.	89	0.01
MN	ST LOUIS	198,213	4.5	.	.	0.074	58	.
MN	SHERBURNE	41,945	.	.	.	.	38	0.011
MN	STEARNS	118,791	4	.	.	.	.	.
MN	WASHINGTON	145,896	.	.	.	0.09	48	0.041
MN	WRIGHT	68,710	.	.	0.0083	.	.	0.007
MS	ADAMS	35,356	.	.	.	0.094	.	.
MS	CHOCTAW	9,071	1.2	0.01	0.0043	0.055	14	0.006
MS	COAHOMA	31,665	.	.	.	.	37	.
MS	DE SOTO	67,910	.	.	.	0.145	.	.
MS	HANCOCK	31,760	.	.	.	0.104	.	.
MS	HARRISON	165,365	.	.	.	.	.	0.043
MS	HINDS	254,441	4.8	.	.	0.097	55	0.008
MS	JACKSON	115,243	.	.	.	0.101	33	0.017
MS	JONES	62,031	.	.	.	.	44	.
MS	LAUDERDALE	75,555	.	.	.	0.091	.	.
MS	LEE	65,581	.	.	.	0.086	.	.
MS	MADISON	53,794	.	.	.	0.088	.	.
MS	SHARKEY	7,066	.	.	.	0.09	.	.
MS	WARREN	47,880	.	.	.	0.097	40	.
MS	WASHINGTON	67,935	.	.	.	.	39	.
MO	AUDRAIN	23,599	.	.	.	.	40	.
MO	BUCHANAN	83,083	.	.	.	.	126	0.079
MO	CHRISTIAN	32,644	.	.	.	.	148	.
MO	CLAY	153,411	4.4	.	0.0132	0.114	.	0.009
MO	GREENE	207,949	3.3	.	0.0113	0.095	101	0.089
MO	HOLT	6,034	.	0.82	.	.	.	.
MO	HOWELL	31,447	.	.	.	.	1321	.
MO	IRON	10,726	.	9.89	.	.	.	0.084
MO	JACKSON	633,232	3.8	0.01	0.0178	0.094	73	0.033
MO	JEFFERSON	171,380	.	5.74	.	0.113	43	0.078
MO	MARION	27,682	.	.	.	.	34	.
MO	MONROE	9,104	.	.	.	0.098	35	0.01
MO	PLATTE	57,867	.	.	0.0124	0.092	.	0.008
MO	ST CHARLES	212,907	.	.	0.0107	0.122	41	.
MO	STE GENEVIEVE	16,037	.	.	0.004	0.122	47	.
MO	ST LOUIS	993,529	4.2	0.03	0.0218	0.11	57	.
MO	TANEY	25,561	1.1	.	.	.	.	.
MO	ST LOUIS	396,685	6.4	.	0.0248	0.116	85	0.04
MT	BIG HORN	11,337	.	.	.	.	103	.
MT	BROADWATER	3,318	.	.	.	.	61	0.014
MT	CASCADE	77,691	5.4	.	.	.	59	0.02
MT	FERGUS	12,083	.	.	.	.	38	.
MT	FLATHEAD	59,218	11.1	.	.	0.064	91	.
MT	GALLATIN	50,463	.	.	.	.	74	.
MT	GLACIER	12,121	.	.	.	.	54	.
MT	JEFFERSON	7,939	.	.	.	.	34	0.055
MT	LAKE	21,041	.	.	.	.	122	.
MT	LEWIS AND CLARK	47,495	.	3.12	.	.	.	.
MT	LINCOLN	17,481	.	.	.	.	94	.
MT	MADISON	5,989	.	.	.	.	30	.
MT	MISSOULA	78,687	5.6	.	.	.	112	.
MT	PARK	14,562	.	.	.	.	48	.
MT	PHILLIPS	5,163	.	.	.	.	30	.
MT	RAVALLI	25,010	.	.	.	.	69	.
MT	ROOSEVELT	10,999	.	.	.	.	53	.
MT	ROSEBUD	10,505	.	.	0.0057	.	120	0.011
MT	SANDERS	8,669	.	.	.	.	109	.
MT	SILVER BOW	33,941	.	.	.	.	90	.
MT	STILLWATER	6,536	.	.	.	.	35	.
MT	YELLOWSTONE	113,419	7.1	.	.	.	75	0.099
NE	ADAMS	29,625	.	.	.	.	60	.
NE	BUFFALO	37,447	.	.	.	.	74	.
NE	CASS	21,318	.	.	.	.	145	.
NE	DAWSON	19,940	.	.	.	.	99	.
NE	DOUGLAS	416,444	6.9	5.06	.	0.074	81	0.051

**Table A-11.** Maximum Air Quality Concentrations by County, 1996 (continued)

State	County	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> 24-hr (ppm)
NE	LANCASTER	213,641	4.7	.	.	0.06	63	.
NE	OTOE	14,252	.	.	.	.	41	.
NE	SCOTTS BLUFF	36,025	.	.	.	.	51	.
NV	CHURCHILL	17,938	.	.	.	.	61	.
NV	CLARK	741,459	10.1	.	0.0271	0.096	328	.
NV	DOUGLAS	27,637	2.1	.	0.0101	0.083	82	.
NV	ELKO	33,530	.	.	.	.	107	.
NV	LANDER	6,266	.	.	.	.	143	.
NV	PERSHING	4,336	.	.	.	.	144	.
NV	WASHOE	254,667	7.6	.	.	0.096	131	.
NV	WHITE PINE	9,264	.	.	.	0.081	55	.
NV	CARSON CITY	40,443	.	.	.	.	52	.
NH	BELKNAP	49,216	.	.	.	0.088	.	.
NH	CARROLL	35,410	.	.	.	0.079	.	.
NH	CHESHIRE	70,121	.	.	.	0.091	46	0.024
NH	COOS	34,828	.	.	.	.	61	0.045
NH	GRAFTON	74,929	.	.	.	0.07	.	.
NH	HILLSBOROUGH	336,073	7.6	.	0.0192	0.103	44	0.026
NH	MERRIMACK	120,005	.	.	.	0.095	38	0.033
NH	ROCKINGHAM	245,845	.	.	0.0125	0.107	42	0.015
NH	STRAFFORD	104,233	.	.	.	0.098	38	.
NH	SULLIVAN	38,592	.	.	.	0.09	37	0.017
NJ	ATLANTIC	224,327	3.6	0.01	.	0.108	40	0.014
NJ	BERGEN	825,380	4	.	0.0278	0.106	61	0.026
NJ	BURLINGTON	395,066	4.6	.	.	.	.	0.023
NJ	CAMDEN	502,824	5	0.08	0.0235	0.125	65	0.027
NJ	CUMBERLAND	138,053	.	.	.	0.105	.	0.016
NJ	ESSEX	778,206	3.8	0.07	0.0322	0.115	67	0.027
NJ	GLOUCESTER	230,082	.	.	.	0.118	43	0.024
NJ	HUDSON	553,099	6.7	0.03	0.0272	0.12	83	0.03
NJ	HUNTERDON	107,776	.	.	.	0.108	.	.
NJ	MERCER	325,824	.	.	0.0169	0.121	59	.
NJ	MIDDLESEX	671,780	3.3	0.06	0.0203	0.125	46	0.024
NJ	MONMOUTH	553,124	4.6	.	.	0.123	.	.
NJ	MORRIS	421,353	5.4	.	0.0114	0.114	.	0.023
NJ	OCEAN	433,203	4.2	.	.	0.118	.	.
NJ	PASSAIC	453,060	.	0	.	.	48	.
NJ	SALEM	65,294	.	0.02	.	.	.	.
NJ	UNION	493,819	6	.	0.0412	0.111	60	0.03
NJ	WARREN	91,607	.	.	.	.	53	.
NM	BERNALILLO	480,577	7.1	.	0.022	0.098	94	.
NM	CHAVES	57,849	.	.	.	.	37	.
NM	CIBOLA	23,794	.	.	.	.	18	.
NM	DONA ANA	135,510	4.3	0.07	0.009	0.124	143	.
NM	EDDY	48,605	.	.	0.0051	.	.	0.007
NM	GRANT	27,676	.	.	.	.	40	0.02
NM	HIDALGO	5,958	.	.	.	.	35	0.022
NM	LEA	55,765	.	.	.	.	35	.
NM	LUNA	18,110	.	.	.	.	49	.
NM	MC KINLEY	60,686	.	.	.	.	34	.
NM	OTERO	51,928	.	.	.	.	70	.
NM	SANDOVAL	63,319	1.4	.	0.0077	0.088	39	.
NM	SAN JUAN	91,605	2.9	.	0.0068	.	31	.
NM	SANTA FE	98,928	2.2	.	.	.	33	.
NM	TAOS	23,118	.	.	.	.	103	.
NM	VALENCIA	45,235	.	.	.	0.079	.	.
NY	ALBANY	292,594	.	0.03	0.0146	0.105	45	0.025
NY	BRONX	1,203,789	3.3	.	0.0355	0.122	55	0.055
NY	BROOME	212,160	.	.	.	.	34	.
NY	CHAUTAUQUA	141,895	.	.	.	0.097	33	0.039
NY	CHEMUNG	95,195	.	.	.	0.088	24	0.016
NY	DUTCHESS	259,462	.	.	.	0.109	.	.
NY	ERIE	968,532	3.7	0.03	0.0224	0.091	39	0.041
NY	ESSEX	37,152	.	.	.	0.093	25	0.009
NY	GREENE	44,739	.	.	.	.	49	.
NY	HAMILTON	5,279	.	.	.	0.076	.	0.008
NY	HERKIMER	65,797	.	.	.	0.073	30	0.009
NY	JEFFERSON	110,943	.	.	.	0.084	.	.
NY	KINGS	2,300,664	6.1	0.16	0.0347	0.114	57	0.038
NY	MADISON	69,120	.	.	.	0.082	.	0.015
NY	MONROE	713,968	3.9	0.04	.	0.083	54	0.041
NY	NASSAU	1,287,348	4.9	.	0.0258	.	55	0.031

**Table A-11.** Maximum Air Quality Concentrations by County, 1996 (continued)

State	County	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> 24-hr (ppm)
NY	NEW YORK	1,487,536	6.3	0.06	0.0422	.	87	.
NY	NIAGARA	220,756	2.7	0.02	.	0.099	78	0.048
NY	ONEIDA	250,836	.	.	.	0.076	43	.
NY	ONONDAGA	468,973	3.9	.	.	0.088	61	0.012
NY	ORANGE	307,647	.	0.06	.	0.12	.	.
NY	PUTNAM	83,941	.	.	.	0.122	37	0.015
NY	QUEENS	1,951,598	.	.	.	0.108	.	0.035
NY	RENSSELAER	154,429	.	.	.	.	42	0.011
NY	RICHMOND	378,977	.	0.04	.	0.117	45	0.027
NY	ROCKLAND	265,475	.	.	.	.	50	.
NY	SARATOGA	181,276	.	.	.	0.091	45	.
NY	SCHENECTADY	149,285	3.7	.	.	0.085	48	0.021
NY	STEUBEN	99,088	.	.	.	.	26	.
NY	SUFFOLK	1,321,864	.	.	.	0.12	40	0.025
NY	ULSTER	165,304	.	.	.	0.095	51	0.011
NY	WARREN	59,209	.	.	.	.	40	0.013
NY	WAYNE	89,123	.	.	.	0.086	.	.
NY	WESTCHESTER	874,866	.	.	.	0.115	.	.
NC	ALAMANCE	108,213	.	.	.	.	50	.
NC	ALEXANDER	27,544	.	.	.	0.094	60	0.012
NC	BEAUFORT	42,283	.	.	.	.	33	0.024
NC	BUNCOMBE	174,821	.	.	.	0.084	76	.
NC	CABARRUS	98,935	.	.	.	.	46	.
NC	CARTERET	52,556	.	.	.	0.09	.	.
NC	CASWELL	20,693	0.4	.	.	0.108	.	.
NC	CATAWBA	118,412	.	.	.	.	50	.
NC	CHATHAM	38,759	.	.	.	0.1	37	.
NC	COLUMBUS	49,587	.	.	.	.	.	0.006
NC	CUMBERLAND	274,566	4.1	.	.	0.106	53	0.012
NC	DAVIDSON	126,677	.	.	.	.	49	.
NC	DAVIE	27,859	.	.	.	0.103	.	.
NC	DUPLIN	39,995	.	.	.	0.083	.	0.01
NC	DURHAM	181,835	5.4	.	.	0.103	46	.
NC	EDGECOMBE	56,558	.	.	.	0.091	39	0.01
NC	FORSYTH	265,878	4.3	.	0.0164	0.119	58	0.026
NC	FRANKLIN	36,414	0.8	.	.	0.107	.	.
NC	GASTON	175,093	3.6	.	.	.	52	.
NC	GRANVILLE	38,345	0.7	.	.	0.124	44	.
NC	GUILFORD	347,420	3.8	.	.	0.109	54	.
NC	HALIFAX	55,516	.	.	.	.	51	.
NC	HARNETT	67,822	.	.	.	.	45	.
NC	HAYWOOD	46,942	.	.	.	0.095	49	.
NC	HENDERSON	69,285	.	.	.	.	53	.
NC	JOHNSTON	81,306	.	.	.	0.102	.	0.01
NC	LINCOLN	50,319	.	.	.	0.1	50	0.013
NC	MC DOWELL	35,681	.	.	.	.	59	.
NC	MACON	23,499	.	.	.	0.08	.	.
NC	MECKLENBURG	511,433	5.1	.	0.0163	0.13	53	0.015
NC	MICHELL	14,433	.	.	.	.	59	.
NC	NEW HANOVER	120,284	.	.	.	0.09	46	.
NC	NORTHAMPTON	20,798	.	.	.	.	.	0.012
NC	ONSLOW	149,838	.	.	.	.	37	.
NC	ORANGE	93,851	5.1	.	.	.	.	.
NC	PASQUOTANK	31,298	.	.	.	.	33	.
NC	PITT	107,924	.	.	.	0.097	36	.
NC	ROBESON	105,179	.	.	.	.	53	.
NC	ROCKINGHAM	86,064	.	.	.	0.123	.	.
NC	ROWAN	110,605	0.8	.	0.008	0.133	47	.
NC	SWAIN	11,268	.	.	.	0.075	48	0.01
NC	WAKE	423,380	5.6	.	.	0.107	49	.
NC	WATAUGA	36,952	.	.	.	.	46	.
NC	WAYNE	104,666	.	.	.	.	43	.
NC	WILSON	66,061	.	.	.	.	41	.
NC	YANCEY	15,419	.	.	.	0.09	.	0.003
ND	BILLINGS	1,108	.	.	.	.	.	0.007
ND	BURLEIGH	60,131	.	.	.	.	27	.
ND	CASS	102,874	.	.	0.008	0.075	54	0.008
ND	DUNN	4,005	.	.	.	.	.	0.007
ND	GRAND FORKS	70,683	.	.	.	.	53	.
ND	MC KENZIE	6,383	.	.	.	0.063	.	.
ND	MERCER	9,808	.	.	0.0043	0.062	45	0.033
ND	MORTON	23,700	.	.	.	.	.	0.056

**Table A-11.** Maximum Air Quality Concentrations by County, 1996 (continued)

State	County	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> 24-hr (ppm)
ND	OLIVER	2,381	.	.	0.003	0.063	.	0.013
ND	STARK	22,832	.	.	.	.	23	.
ND	STEELE	2,420	.	.	0.0027	0.068	38	0.006
ND	WILLIAMS	21,129	.	.	.	.	23	0.013
OH	ADAMS	25,371	.	.	.	.	.	0.026
OH	ALLEN	109,755	.	.	.	0.11	44	0.015
OH	ASHTABULA	99,821	.	.	.	0.105	.	0.022
OH	ATHENS	59,549	.	.	.	.	47	.
OH	BELMONT	71,074	.	.	.	.	86	0.057
OH	BUTLER	291,479	.	0.05	.	0.115	78	0.026
OH	CLARK	147,548	.	.	.	0.116	.	0.031
OH	CLERMONT	150,187	.	.	.	0.104	.	0.025
OH	CLINTON	35,415	.	.	.	0.118	.	.
OH	COLUMBIANA	108,276	.	0.04	0.0191	.	86	0.057
OH	CUYAHOGA	1,412,140	9.4	1.06	0.0259	0.108	123	0.049
OH	FRANKLIN	961,437	2.7	0.07	.	0.107	66	0.021
OH	FULTON	38,498	.	0.44	.	.	.	.
OH	GREENE	136,731	.	.	.	.	27	.
OH	HAMILTON	866,228	2.8	0.22	0.0285	0.107	72	0.036
OH	HANCOCK	65,536	.	.	.	.	44	.
OH	JEFFERSON	80,298	5.3	.	0.0197	0.094	126	0.055
OH	KNOX	47,473	.	.	.	0.113	.	.
OH	LAKE	215,499	1.9	.	.	0.117	42	0.037
OH	LAWRENCE	61,834	.	.	.	0.123	53	0.018
OH	LICKING	128,300	.	.	.	0.108	20	.
OH	LOGAN	42,310	.	0.26	.	0.097	.	.
OH	LORAIN	271,126	.	.	.	0.099	67	0.032
OH	LUCAS	462,361	2.6	.	.	0.113	69	0.049
OH	MADISON	37,068	.	.	.	0.107	.	.
OH	MAHONING	264,806	.	.	.	0.102	47	0.03
OH	MEDINA	122,354	.	.	.	0.096	.	.
OH	MEIGS	22,987	.	.	.	.	.	0.027
OH	MIAMI	93,182	.	.	.	0.11	.	.
OH	MONROE	15,497	.	.	.	.	66	.
OH	MONTGOMERY	573,809	3	0.05	.	0.112	66	0.022
OH	MORGAN	14,194	.	.	.	.	.	0.057
OH	NOBLE	11,336	.	.	.	.	48	.
OH	OTTAWA	40,029	.	.	.	.	38	.
OH	PORTAGE	142,585	.	.	.	0.107	.	.
OH	PREBLE	40,113	.	.	.	0.111	.	.
OH	RICHLAND	126,137	.	.	.	.	68	.
OH	SANDUSKY	61,963	.	.	.	.	79	.
OH	SCIOTO	80,327	.	.	.	.	60	0.023
OH	SENECA	59,733	.	.	.	.	58	.
OH	STARK	367,585	2.5	.	.	0.097	68	0.032
OH	SUMMIT	514,990	3.4	0.04	.	0.103	73	0.042
OH	TRUMBULL	227,813	.	.	.	0.107	43	.
OH	TUSCARAWAS	84,090	.	.	.	.	.	0.034
OH	WARREN	113,909	.	.	.	0.11	.	.
OH	WASHINGTON	62,254	.	.	.	0.105	78	.
OH	WYANDOT	22,254	.	.	.	.	66	.
OK	CARTER	42,919	.	.	.	.	52	.
OK	CLEVELAND	174,253	2.7	.	0.0132	0.088	56	.
OK	COMANCHE	111,486	1.6	.	0.0087	0.077	56	.
OK	GARFIELD	56,735	.	.	0.0094	.	.	.
OK	GARVIN	26,605	.	.	.	.	.	0.014
OK	KAY	48,056	.	.	.	.	70	0.02
OK	MC CLAIN	22,795	.	.	.	0.089	.	.
OK	MAYES	33,366	.	.	.	.	60	.
OK	MUSKOGEE	68,078	.	.	0.0085	.	91	0.021
OK	OKLAHOMA	599,611	7.9	0.01	0.0139	0.102	54	0.005
OK	TULSA	503,341	6.8	0.11	0.015	0.115	76	0.042
OK	WOODWARD	18,976	.	.	.	.	69	.
OR	CLACKAMAS	278,850	.	.	.	0.133	39	.
OR	COLUMBIA	37,557	.	.	.	0.094	.	.
OR	DESCHUTES	74,958	5.3	.	.	.	123	.
OR	JACKSON	146,389	6.6	0.02	.	0.101	82	.
OR	JOSEPHINE	62,649	6	.	.	.	62	.
OR	KLAMATH	57,702	4.8	.	.	.	86	.
OR	LAKE	7,186	.	.	.	.	68	.
OR	LANE	282,912	5.7	0.02	.	0.111	78	.
OR	MARION	228,483	7.1	.	.	0.117	.	.



**Table A-11.** Maximum Air Quality Concentrations by County, 1996 (continued)

State	County	1990 Population	CO 8-hr (ppm)	Pb QMAX ( $\mu\text{gm}$ )	$\text{NO}_2$ AM (ppm)	$\text{O}_3$ 2nd MAX (ppm)	$\text{PM}_{10}$ 2nd MAX ( $\mu\text{gm}$ )	$\text{SO}_2$ 24-hr (ppm)
TN	HAMILTON	285,536	.	.	.	0.114	65	.
TN	HARDIN	22,633	.	.	.	.	.	0.018
TN	HAWKINS	44,565	.	.	.	.	.	0.052
TN	HAYWOOD	19,437	.	.	.	0.1	.	.
IN	HENRY	27,888	.	.	.	.	53	.
TN	HUMPHREYS	15,795	.	.	.	0.102	51	0.02
TN	JEFFERSON	33,016	.	.	.	0.125	.	.
TN	KNOX	335,749	3.3	.	.	0.114	66	.
TN	LOUDON	31,255	0.9	.	0.0141	0.112	43	0.024
TN	MC MINN	42,383	.	.	0.0143	.	60	.
TN	MADISON	77,982	.	0.02	.	.	45	.
TN	MAURY	54,812	.	.	.	.	51	.
TN	MONTGOMERY	100,498	.	.	.	.	56	0.023
TN	POLK	13,643	.	.	.	.	.	0.037
TN	PUTNAM	51,373	.	.	0.0065	.	39	0.008
TN	ROANE	47,227	.	0.17	.	.	53	0.021
TN	RUTHERFORD	118,570	.	.	.	0.092	.	0.006
TN	SEVIER	51,043	.	.	.	0.107	.	.
TN	SHELBY	826,330	6.5	2.81	0.0241	0.122	60	0.017
TN	STEWART	9,479	.	.	.	.	.	0.019
TN	SULLIVAN	143,596	3	0.13	0.0176	0.104	67	0.05
TN	SUMNER	103,281	.	.	.	0.119	.	0.076
TN	UNION	13,694	.	.	.	.	78	.
TN	WASHINGTON	92,315	.	.	.	.	48	.
TN	WILLIAMSON	81,021	.	0.9	.	0.106	.	0.005
TN	WILSON	67,675	.	.	.	0.115	.	0.009
TX	BELL	191,088	.	.	.	.	41	.
TX	BEXAR	1,185,394	5	0.02	0.009	0.126	38	.
TX	BRAZORIA	191,707	.	.	.	0.11	.	.
TX	BREWSTER	8,681	.	.	.	0.084	.	.
TX	CAMERON	260,120	2.2	0.02	.	0.077	40	0.004
TX	COLLIN	264,036	.	0.7	.	0.114	65	.
TX	DALLAS	1,852,810	5.5	0.17	0.019	0.135	87	0.008
TX	DENTON	273,525	.	.	0.01	0.131	.	.
TX	ECTOR	118,934	.	.	.	.	59	.
TX	ELLIS	85,167	.	0.27	0.007	0.108	102	0.046
TX	EL PASO	591,610	10.3	0.4	0.0351	0.123	158	.
TX	GALVESTON	217,399	.	0.02	0.0051	0.107	52	0.067
TX	GREGG	104,948	.	.	.	0.106	.	.
TX	HARRIS	2,818,199	7	0.02	0.0233	0.18	68	0.046
TX	HIDALGO	383,545	.	.	.	0.063	111	.
TX	JEFFERSON	239,397	2.1	0.02	0.0083	0.117	34	0.044
TX	KAUFMAN	52,220	.	0.03	.	.	.	.
TX	LUBBOCK	222,636	.	.	.	.	85	.
TX	NUECES	291,145	.	.	.	0.103	45	0.015
TX	ORANGE	80,509	.	.	0.0111	0.119	.	.
TX	POTTER	97,874	.	.	.	.	38	.
TX	SMITH	151,309	.	.	.	0.104	30	.
TX	TARRANT	1,170,103	3.2	0.02	0.021	0.131	56	0.011
TX	TRAVIS	576,407	3.2	.	0.0182	0.098	32	.
TX	VICTORIA	74,361	.	.	.	0.087	.	.
TX	WEBB	133,239	5.5	.	.	0.069	103	.
TX	WICHITA	122,378	.	.	.	.	50	.
UT	CACHE	70,183	5.7	.	.	0.083	109	.
UT	DAVIS	187,941	4	.	0.0204	0.114	109	0.013
UT	GRAND	6,620	.	.	.	.	52	.
UT	IRON	20,789	.	.	.	.	38	.
UT	SALT LAKE	725,956	6.9	0.03	0.0253	0.124	157	.
UT	SAN JUAN	12,621	.	.	.	0.077	.	.
UT	TOOELE	26,601	.	.	.	.	50	0.002
UT	UTAH	263,590	9.1	.	0.0242	0.105	141	.
UT	WASHINGTON	48,560	3.4	.	.	0.086	85	.
UT	WEBER	158,330	7	.	0.0263	0.103	98	.
VT	BENNINGTON	35,845	.	.	.	0.098	41	.
VT	CHITTENDEN	131,761	3.3	.	0.0165	0.075	37	0.014
VT	RUTLAND	62,142	3.6	.	0.0124	.	39	0.032
VT	WASHINGTON	54,928	.	.	.	.	38	.
VT	WINDHAM	41,588	.	.	.	.	41	.
VA	ARLINGTON	170,936	4	.	0.0243	0.112	38	.
VA	CAROLINE	19,217	.	.	0.0073	0.097	.	.
VA	CARROLL	26,594	.	.	.	.	46	.
VA	CHARLES CITY	6,282	.	.	0.0102	0.104	.	.

**Table A-11.** Maximum Air Quality Concentrations by County, 1996 (continued)

State	County	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> 24-hr (ppm)
VA	CHESTERFIELD	209,274	.	.	.	0.106	69	.
VA	CULPEPER	27,791	.	.	.	37	.	.
VA	FAIRFAX	818,584	4.4	0.02	0.0218	0.116	50	0.04
VA	FAUQUIER	48,741	.	.	.	0.094	.	.
VA	FREDERICK	45,723	.	.	.	0.095	.	.
VA	HANOVER	63,306	.	.	.	0.099	.	.
VA	HENRICO	217,881	.	.	.	0.102	64	.
VA	HENRY	56,942	.	.	.	0.104	.	.
VA	KING WILLIAM	10,913	.	.	.	.	56	.
VA	LOUDOUN	86,129	.	.	.	.	56	.
VA	MADISON	11,949	.	.	.	0.093	.	.
VA	NORTHUMBERLAND	10,524	.	.	.	.	45	.
VA	PRINCE WILLIAM	215,686	.	.	0.0113	0.098	36	.
VA	ROANOKE	79,332	.	.	0.0128	0.084	.	0.014
VA	SMYTH	32,370	.	.	.	.	40	.
VA	STAFFORD	61,236	.	.	.	0.1	.	.
VA	TAZEWELL	45,960	.	.	.	.	61	.
VA	WARREN	26,142	.	.	.	.	37	.
VA	WISE	39,573	.	.	.	.	61	.
VA	WYTHE	25,466	.	.	.	0.084	.	.
VA	ALEXANDRIA	111,183	3.7	.	0.0263	0.093	57	0.048
VA	BRISTOL	18,426	.	.	.	.	39	.
VA	CHARLOTTESVILLE	40,341	.	.	.	.	39	.
VA	CHESAPEAKE	151,976	.	0.03	.	.	38	.
VA	COVINGTON	6,991	.	.	.	.	47	.
VA	FREDERICKSBURG	19,027	.	.	.	.	38	.
VA	HAMPTON	133,793	.	.	.	0.097	50	0.019
VA	LYNCHBURG	66,049	.	.	.	.	41	.
VA	MARTINSVILLE	16,162	.	.	.	.	49	.
VA	NEWPORT NEWS	170,045	2.8	.	.	.	.	.
VA	NORFOLK	261,229	5.9	.	0.0179	.	36	0.025
VA	RICHMOND	203,056	3.2	0.01	0.0222	.	56	0.027
VA	ROANOKE	96,397	5.9	.	.	.	78	.
VA	SUFFOLK	52,141	.	.	.	0.093	46	.
VA	WINCHESTER	21,947	.	.	.	.	45	.
WA	ASOTIN	17,605	.	.	.	.	75	.
WA	BENTON	112,560	.	.	.	.	82	.
WA	CHELAN	52,250	.	.	.	.	37	.
WA	CLALLAM	56,464	.	.	.	0.058	43	0.085
WA	CLARK	238,053	6.4	.	.	0.108	44	.
WA	COWLITZ	82,119	.	.	.	.	55	.
WA	KING	1,507,319	6.8	0.66	0.0201	0.118	93	0.019
WA	KITSAP	189,731	3.5	.	.	.	41	.
WA	PIERCE	586,203	6.3	.	.	0.097	74	0.028
WA	SKAGIT	79,555	.	.	.	0.064	.	0.031
WA	SNOHOMISH	465,642	4.9	.	.	0.076	80	0.014
WA	SPOKANE	361,364	9	.	.	0.079	110	.
WA	THURSTON	161,238	4	.	.	.	53	.
WA	WALLA WALLA	48,439	.	.	.	.	122	.
WA	WHATCOM	127,780	.	.	.	0.078	37	0.013
WA	YAKIMA	188,823	7.4	.	.	.	112	.
WV	BERKELEY	59,253	.	0.01	.	.	.	.
WV	BROOKE	26,992	.	.	.	.	87	0.04
WV	CABELL	96,827	.	0.05	.	0.113	.	0.023
WV	FAYETTE	47,952	.	.	.	.	46	.
WV	GREENBRIER	34,693	.	.	0.0047	0.09	.	0.019
WV	HANCOCK	35,233	6.2	0.04	0.0158	0.099	170	0.066
WV	HARRISON	69,371	.	0.01	.	.	.	.
WV	KANAWHA	207,619	2.3	0.02	0.0197	0.104	50	0.039
WV	MARION	57,249	.	0.03	.	.	49	0.072
WV	MARSHALL	37,356	.	.	.	.	57	0.042
WV	MONONGALIA	75,509	.	0.01	.	.	48	0.045
WV	OHIO	50,871	3.5	.	.	0.105	48	.
WV	PUTNAM	42,835	.	.	.	.	51	.
WV	TUCKER	7,728	.	.	.	0.096	.	.
WV	WAYNE	41,636	.	.	.	.	50	0.035
WV	WOOD	86,915	.	0.02	.	0.108	50	0.046
WI	BROWN	194,594	.	.	.	0.105	.	0.011
WI	COLUMBIA	45,088	.	.	.	0.093	.	.
WI	DANE	367,085	4.1	.	.	0.094	44	0.01
WI	DODGE	76,559	.	.	.	0.092	.	.
WI	DOOR	25,690	.	.	.	0.107	.	.

**Table A-11.** Maximum Air Quality Concentrations by County, 1996 (continued)

State	County	1990 Population	CO 8-hr (ppm)	Pb QMAX ( $\mu\text{gm}$ )	$\text{NO}_2$ AM (ppm)	$\text{O}_3$ 2nd MAX (ppm)	$\text{PM}_{10}$ 2nd MAX ( $\mu\text{gm}$ )	$\text{SO}_2$ 24-hr (ppm)
WI	DOUGLAS	41,758	.	.	.	.	44	.
WI	FLORENCE	4,590	.	.	.	0.081	.	.
WI	FOND DU LAC	90,083	.	.	.	0.096	.	.
WI	JEFFERSON	67,783	.	.	.	0.091	.	.
WI	KENOSHA	128,181	.	.	.	0.141	.	.
WI	KEWAUNEE	18,878	.	.	.	0.097	.	.
WI	MANITOWOC	80,421	.	.	0.0034	0.126	.	.
WI	MARATHON	115,400	.	.	.	0.079	50	0.015
WI	MILWAUKEE	959,275	2.7	0.03	0.021	0.119	52	0.028
WI	ONEIDA	31,679	.	.	.	0.078	.	0.067
WI	OUTAGAMIE	140,510	.	.	.	0.094	.	.
WI	OZAUKEE	72,831	.	.	0.0065	0.11	.	.
WI	POLK	34,773	0.9	.	.	0.08	.	.
WI	RACINE	175,034	3	.	.	0.129	.	.
WI	ROCK	139,510	.	.	.	0.103	.	.
WI	ST CROIX	50,251	.	.	.	0.083	.	.
WI	SAUK	46,975	.	.	0.0046	0.082	.	.
WI	SHEBOYGAN	103,877	.	.	.	0.105	.	.
WI	TAYLOR	18,901	.	.	.	0.073	.	.
WI	VERNON	25,617	.	.	.	0.077	30	.
WI	VILAS	17,707	.	.	.	.	30	.
WI	WALWORTH	75,000	.	.	.	0.1	.	.
WI	WASHINGTON	95,328	.	.	.	0.095	.	.
WI	WAUKESHA	304,715	1.5	.	.	0.093	69	.
WI	WINNEBAGO	140,320	.	.	.	0.094	.	.
WY	ALBANY	30,797	.	.	.	0.08	55	.
WY	CAMPBELL	29,370	.	.	.	.	101	.
WY	FREMONT	33,662	.	.	.	.	78	.
WY	LARAMIE	73,142	.	.	.	.	31	.
WY	NATRONA	61,226	.	.	.	.	36	.
WY	PARK	23,178	.	.	.	.	23	.
WY	SHERIDAN	23,562	.	.	.	.	80	.
WY	SWEETWATER	38,823	.	.	.	.	69	.
WY	TETON	11,172	.	.	.	0.072	93	.

CO = Highest second maximum non-overlapping 8-hour concentration (Applicable NAAQS is 9 ppm)

Pb = Highest quarterly maximum concentration (Applicable NAAQS is 1.5  $\mu\text{g}/\text{m}^3$ )

$\text{NO}_2$  = Highest arithmetic mean concentration (Applicable NAAQS is 0.053 ppm)

$\text{O}_3$  = Highest second daily maximum 1-hour concentration (Applicable NAAQS is 0.12 ppm)

PM-10 = Highest second maximum 24-hour concentration (Applicable NAAQS is 150  $\mu\text{g}/\text{m}^3$ )  
Data from exceptional events not included.

$\text{SO}_2$  = Highest second maximum 24-hour concentration (Applicable NAAQS is 0.14 ppm)

WTD = Weighted

AM = Annual mean

UGM = Units are micrograms per cubic meter

PPM = Units are parts per million

**Note:** The reader is cautioned that this summary is not adequate in itself to numerically rank counties according to their air quality. The monitoring data represent the quality of air in the vicinity of the monitoring site but may not necessarily represent urban-wide air quality.

**Table A-12.** Trends From IMPROVE Monitoring Sites, 1988–1995**TOTAL LIGHT EXTINCTION (Mm<sup>-1</sup>)**

SITE	PERCENTILE	SLOPE	LEVEL	OBSERVED SIGNIFICANCE							
				1988	1989	1990	1991	1992	1993	1994	1995
Acadia NP	10TH	-.0377*	.0156	36.5	40.9	41.4	38.3	32.1	35.4	30.9	30.8
Badlands (W)	10TH	-.0222	.0543	28.0	25.8	26.4	26.5	27.2	25.8	24.3	21.9
Bandelier (W)	10TH	-.0323	.0894	22.6	26.5	28.2	25.4	23.5	24.2	22.9	18.3
Big Bend NP	10TH	-.0222	.0894	27.4	27.9	29.1	25.9	22.8	26.2	23.5	24.9
Bryce Canyon NP	10TH	-.0311	.0894	19.4	17.9	19.7	20.5	19.6	18.6	16.9	15.2
Bridger (W)	10TH	-.0253	.0543	16.5	17.2	19.3	16.5	17.0	15.4	16.2	13.7
Canyonlands NP	10TH	-.0386	.0543	20.3	22.0	24.6	23.0	20.0	21.0	19.4	16.4
Chiricahua (W)	10TH	-.0167*	.0305	22.7	22.1	23.0	22.3	20.5	21.7	20.4	20.8
Crater Lake NP	10TH	-.0242	.0543	17.9	19.2	19.3	19.2	18.8	16.6	17.3	14.6
Denali NP	10TH	-.0246*	.0071	17.2	16.4	21.5	17.0	15.7	15.2	15.2	14.5
Glacier NP	10TH	-.0169	.2742	29.7	31.3	33.9	35.7	35.1	32.3	27.9	26.4
Grand Canyon NP	10TH	-.0116	.2742	17.9	18.4	22.4	20.6	20.3	18.1	17.0	18.3
Great Sand Dunes (W)	10TH	-.0629*	.0071	23.6	22.2	26.4	24.8	21.2	19.9	18.5	15.8
Great Smoky Mtns NP	10TH	-.0190*	.0305	48.9	51.4	50.2	50.7	46.8	47.6	44.9	45.7
Guadalupe Mtns NP	10TH	-.0171	.1375	27.1	30.2	28.1	23.1	25.3	26.9	23.7	26.0
Lassen Volcanic NP	10TH	-.0311	.0543	17.5	18.8	20.4	16.0	18.5	16.2	16.0	14.9
Mesa Verde NP	10TH	-.0415	.0894	21.6	19.6	25.2	22.6	20.2	19.1	20.2	15.7
Mt. Rainier NP	10TH	-.0305	.2742	24.7	23.4	27.4	27.9	32.7	25.4	21.1	19.0
Petrified Forest NP	10TH	-.0547*	.0305	23.3	28.0	28.4	27.7	24.0	22.2	22.4	19.5
Pinnacles (W)	10TH	-.0389*	.0156	31.9	32.8	41.1	29.5	27.7	31.6	25.7	25.1
Pt. Reyes NS	10TH	-.0257	.1375	32.0	33.7	42.8	35.5	33.0	35.2	31.0	27.8
Redwood NP	10TH	-.0316*	.0071	28.7	26.2	31.1	26.1	27.5	23.7	23.3	23.0
Rocky Mtns NP	10TH	-.0168	.1375	19.8	17.9	19.4	18.1	18.6	18.1	18.4	14.9
San Gorgonio (W)	10TH	-.0265	.1994	23.1	22.0	30.8	21.9	19.8	22.1	18.2	22.5
Shenandoah NP	10TH	-.0150	.1375	63.2	54.5	58.3	60.8	48.7	59.8	48.6	56.1
Tonto NM	10TH	-.0289*	.0156	27.8	27.1	29.8	25.3	25.9	24.1	22.5	24.4
Washington, DC	10TH	-.0021	.4524	88.0	93.3	95.6	92.2	93.4	107.5	91.9	68.9
Weminuche (W)	10TH	0.0016	.5476	17.6	18.4	19.7	20.9	20.6	18.1	20.5	15.4
Yellowstone NP	10TH	-.0550*	.0071	22.8	21.6	24.4	22.2	19.4	16.8	17.1	16.4
Yosemite NP	10TH	-.0060	.1994	18.1	17.1	24.2	17.9	18.8	18.0	16.4	17.7
Acadia NP	50TH	-.0314	.1375	61.0	75.9	65.0	66.4	59.5	61.0	61.5	53.2
Badlands (W)	50TH	-.0170	.0543	43.9	46.1	43.5	45.1	44.4	38.2	40.2	39.7
Bandelier (W)	50TH	-.0466*	.0071	32.9	34.6	35.6	33.7	32.0	30.8	28.9	24.8
Big Bend NP	50TH	-.0069	.1375	42.2	44.9	42.2	41.0	40.9	41.3	42.6	40.3
Bryce Canyon NP	50TH	-.0198	.1375	31.4	31.5	28.8	31.6	28.7	28.8	30.4	24.1
Bridger (W)	50TH	-.0242	.1375	24.5	24.9	27.6	26.1	27.0	22.4	23.6	21.0
Canyonlands NP	50TH	-.0264	.0894	29.7	29.2	34.7	33.2	29.5	29.2	29.3	23.1
Chiricahua (W)	50TH	-.0218*	.0305	34.4	32.8	34.5	32.0	30.1	32.8	31.1	29.1
Crater Lake NP	50TH	0.0065	.4524	24.0	28.1	30.2	32.2	30.4	25.2	31.4	22.4
Denali NP	50TH	-.0366*	.0156	22.5	24.3	27.5	21.1	19.5	19.4	21.0	18.0
Glacier NP	50TH	-.0152	.1994	52.7	51.0	54.0	55.0	54.5	48.6	51.0	44.1
Grand Canyon NP	50TH	-.0287	.0543	27.7	29.5	32.7	30.7	29.2	27.4	27.4	25.3
Great Sand Dunes (W)	50TH	-.0401*	.0156	30.5	33.4	33.1	31.9	30.7	26.4	27.1	23.9
Great Smoky Mtns NP	50TH	0.0105	.4524	86.3	93.1	94.5	85.8	100.2	104.8	76.3	90.7
Guadalupe Mtns NP	50TH	-.0093	.2742	39.7	42.1	45.6	37.6	34.2	37.4	41.0	37.9
Lassen Volcanic NP	50TH	-.0210*	.0305	29.7	29.0	29.3	25.7	27.5	26.7	27.6	24.5
Mesa Verde NP	50TH	-.0176	.1994	29.5	27.2	28.2	30.7	26.7	27.2	29.0	23.6
Mt. Rainier NP	50TH	0.0037	.5476	58.0	54.3	55.0	65.7	69.7	67.8	57.2	48.5

**Table A-12.** Trends From IMPROVE Monitoring Sites, 1988–1995 (continued)**TOTAL LIGHT EXTINCTION (Mm<sup>-1</sup>)**

SITE	PERCENTILE	SLOPE	LEVEL	OBSERVED SIGNIFICANCE							
				1988	1989	1990	1991	1992	1993	1994	1995
Petrified Forest NP	50TH	-.0416*	.0305	36.1	37.2	40.4	39.2	35.2	31.1	32.6	27.6
Pinnacles (W)	50TH	-.0323	.0894	55.1	58.1	63.5	55.1	52.3	55.5	46.2	47.6
Pt. Reyes NS	50TH	-.0375	.0543	56.8	62.6	68.7	59.6	51.5	53.3	55.2	44.5
Redwood NP	50TH	-.0191	.0894	48.7	52.3	58.5	51.6	50.5	43.5	48.7	46.7
Rocky Mtns NP	50TH	-.0186	.0894	30.5	31.3	31.8	30.2	31.9	27.7	30.1	23.7
San Gorgonio (W)	50TH	-.0178	.1994	65.0	71.3	70.3	73.8	57.5	72.7	62.2	55.9
Shenandoah NP	50TH	-.0126	.1375	125.7	105.6	117.8	124.0	125.6	122.5	109.1	103.8
Tonto NM	50TH	-.0252*	.0305	38.1	42.1	39.3	38.5	39.0	37.4	34.7	34.7
Washington, DC	50TH	0.0059	.2742	121.0	154.8	152.6	175.8	171.9	176.6	155.7	126.8
Weminuche (W)	50TH	-.0168*	.0305	29.0	30.7	29.3	29.8	29.0	27.7	28.6	23.0
Yellowstone NP	50TH	-.0364	.0543	27.8	29.5	31.5	31.7	28.2	26.7	26.1	21.9
Yosemite NP	50TH	-.0003	.5476	35.9	36.4	40.2	40.6	42.1	36.6	33.0	36.1
Acadia NP	90TH	0.0053	.5476	145.7	156.1	131.9	133.7	152.2	153.9	155.8	122.9
Badlands (W)	90TH	0.0081	.4524	68.0	65.3	65.3	67.6	86.8	69.3	74.6	64.8
Bandelier (W)	90TH	-.0119	.4524	41.9	52.2	36.2	40.6	44.9	42.4	43.2	38.2
Big Bend NP	90TH	-.0015	.3598	67.3	70.1	63.5	67.0	61.3	63.9	69.0	66.6
Bryce Canyon NP	90TH	-.0091	.1375	41.1	44.8	38.7	40.1	40.2	41.3	40.0	36.8
Brider (W)	90TH	-.0170	.0543	37.8	37.5	38.0	36.4	40.3	31.6	35.2	30.7
Canyonlands NP	90TH	-.0394*	.0071	43.1	45.4	45.3	42.9	37.1	39.0	38.3	32.4
Chiricahua (W)	90TH	-.0050	.1994	51.0	45.7	45.9	45.5	45.1	48.0	48.7	44.5
Crater Lake NP	90TH	0.0006	.5476	47.4	52.7	51.0	49.2	48.0	53.6	53.5	41.6
Denali NP	90TH	-.0254	.1994	35.0	34.6	44.1	39.4	30.3	34.8	36.4	29.5
Glacier NP	90TH	-.0089	.3598	73.1	89.6	88.1	90.0	92.9	86.2	85.3	80.6
Grand Canyon NP	90TH	-.0142	.1375	40.0	44.2	44.9	38.3	38.8	39.6	39.6	36.3
Great Sand Dunes (W)	90TH	-.0353	.0894	43.2	48.1	42.7	42.2	36.0	37.4	52.7	34.6
Great Smoky Mtns NP	90TH	0.0113	.3598	154.0	175.9	219.0	194.6	188.5	172.9	185.8	188.6
Guadalupe Mtns NP	90TH	-.0209	.0894	62.8	69.1	58.7	55.2	53.7	55.6	61.9	54.7
Lassen Volcanic NP	90TH	-.0116	.3598	48.5	54.3	43.6	37.2	45.7	46.5	49.1	41.9
Mesa Verde NP	90TH	-.0078	.2742	37.5	41.3	43.7	36.2	34.4	42.9	39.4	36.0
Mt. Rainier NP	90TH	-.0310	.2742	107.1	130.6	165.1	131.0	132.4	113.4	120.9	100.7
Petrified Forest NP	90TH	-.0323*	.0156	48.8	51.4	54.0	47.7	46.3	43.4	41.0	44.2
Pinnacles (W)	90TH	-.0393*	.0305	78.7	97.5	96.5	86.0	87.9	77.3	74.8	74.9
Pt. Reyes NS	90TH	-.0319	.2742	94.8	167.2	126.7	108.1	120.0	159.8	109.4	90.3
Redwood NP	90TH	-.0235	.0894	92.4	98.7	99.6	95.6	98.0	82.4	76.3	86.8
Rocky Mtns NP	90TH	-.0175	.0543	43.7	50.1	46.9	44.0	43.0	44.6	43.6	42.4
San Gorgonio (W)	90TH	-.0334	.0543	128.7	136.0	144.0	129.7	141.8	119.9	116.7	98.5
Shenandoah NP	90TH	0.0091	.3598	227.2	232.3	249.8	263.7	255.2	219.7	240.7	244.7
Tonto NM	90TH	-.0113	.1994	52.8	62.1	48.8	51.6	51.7	54.7	43.9	49.7
Washington, DC	90TH	0.0005	.5476	246.2	235.6	229.1	296.0	307.4	298.6	263.2	225.2
Weminuche (W)	90TH	-.0257*	.0156	39.8	46.2	40.4	40.5	37.4	38.4	36.7	35.7
Yellowstone NP	90TH	-.0358*	.0305	50.7	49.3	47.5	42.7	46.8	38.7	50.1	37.2
Yosemite NP	90TH	-.0088	.3598	73.1	66.0	73.4	63.0	73.4	60.1	65.8	69.6

\* Denotes that the slope is significant at the .05 significance level.

NP = National Park

W = Wilderness

NS = National Seashore

NM = National Monument

**Table A-12.** Trends From IMPROVE Monitoring Sites, 1988–1995**LIGHT EXTINCTION DUE TO SULFATE (Mm<sup>-1</sup>)**

SITE	PERCENTILE	SLOPE	LEVEL	OBSERVED SIGNIFICANCE							
				1988	1989	1990	1991	1992	1993	1994	1995
Acadia NP	10TH	-.0353	.1375	12.5	16.1	17.0	14.7	12.0	13.8	11.0	12.9
Badlands (W)	10TH	0.0187	.3598	4.9	5.5	6.0	6.0	7.8	6.5	5.8	5.2
Bandelier (W)	10TH	-.0200	.3598	2.8	3.7	4.7	4.3	4.7	4.1	3.5	2.5
Big Bend NP	10TH	-.0130	.4524	5.7	6.4	7.0	5.2	5.0	6.5	5.2	6.0
Bryce Canyon NP	10TH	-.0362	.4524	3.0	1.9	2.7	3.2	3.9	3.0	2.3	2.1
Bridger (W)	10TH	0.0000	.5476	1.7	1.8	2.7	2.0	2.9	2.0	2.0	1.6
Canyonlands NP	10TH	-.0629	.3598	3.0	3.1	5.1	3.8	3.9	3.5	3.1	2.0
Chiricahua (W)	10TH	0.0000	.5476	3.4	3.6	4.5	4.2	4.0	4.2	3.4	3.7
Crater Lake NP	10TH	-.0138	.4524	1.7	2.1	2.5	2.0	3.5	2.3	2.0	1.5
Denali NP	10TH	0.0123	.4524	1.6	1.6	2.7	2.1	2.2	1.9	2.1	1.9
Glacier NP	10TH	-.0105	.5476	5.7	8.5	9.6	9.4	11.5	9.0	7.0	7.0
Grand Canyon NP	10TH	0.0000	.5476	2.0	1.9	2.8	2.8	3.6	2.6	1.9	2.3
Great Sand Dunes (W)	10TH	-.0489	.2742	2.9	2.4	4.1	3.5	4.1	3.2	2.8	2.0
Great Smoky Mtns NP	10TH	-.0129	.1994	17.2	21.0	20.7	20.3	18.2	19.2	16.9	19.6
Guadalupe Mtns NP	10TH	0.0060	.5476	5.3	7.1	6.5	4.5	5.7	6.0	5.3	6.9
Lassen Volcanic NP	10TH	0.0000	.4524	1.3	1.6	1.3	0.9	2.5	1.6	1.3	1.4
Mesa Verde NP	10TH	-.0281	.3598	2.6	2.7	5.2	3.5	4.0	3.3	3.1	2.3
Mt. Rainier NP	10TH	-.0353	.2742	5.7	6.3	7.8	7.5	11.7	7.1	4.8	4.0
Petrified Forest NP	10TH	-.0573	.2742	2.7	3.9	4.9	5.1	4.3	3.7	3.2	2.9
Pinnacles (W)	10TH	-.0542	.0543	5.9	5.6	7.3	5.1	4.7	5.9	4.2	4.6
Pt. Reyes NS	10TH	0.0264	.4524	7.1	8.7	15.7	12.8	10.1	12.0	10.9	9.5
Redwood NP	10TH	-.0164	.3598	7.5	5.8	8.5	7.0	9.0	6.3	5.6	7.0
Rocky Mtns NP	10TH	-.0458	.1375	2.1	2.4	2.4	2.2	2.8	2.2	1.8	1.5
San Gorgonio (W)	10TH	0.0205	.3598	1.9	2.0	2.8	2.0	2.3	2.2	1.6	2.4
Shenandoah NP	10TH	-.0058	.3598	26.1	24.7	25.4	26.3	22.6	26.1	19.9	25.5
Tonto NM	10TH	-.0164	.2742	3.3	3.8	5.2	3.6	4.6	3.7	3.2	3.4
Washington, DC	10TH	-.0133	.3598	35.5	34.1	32.9	36.0	39.8	45.7	32.3	29.9
Weminuche (W)	10TH	0.0746	.1994	1.3	1.9	2.4	2.4	3.4	2.4	3.1	1.7
Yellowstone NP	10TH	-.0592*	.0305	3.1	2.5	3.0	2.8	3.0	2.0	2.3	2.0
Yosemite NP	10TH	0.0000	.4524	1.4	1.5	2.7	1.5	2.9	1.8	1.4	1.5
Acadia NP	50TH	-.0491*	.0305	29.5	39.6	35.3	33.3	29.3	30.3	29.4	25.6
Badlands (W)	50TH	0.0092	.2742	11.8	14.1	14.3	14.0	14.7	12.6	14.0	14.3
Bandelier (W)	50TH	0.0000	.5476	6.7	6.6	6.3	6.6	7.3	7.3	6.7	5.0
Big Bend NP	50TH	0.0069	.2742	13.0	12.9	12.9	10.6	12.2	12.9	13.5	13.6
Bryce Canyon NP	50TH	-.0095	.4524	7.8	7.4	6.7	7.6	8.4	7.1	8.8	6.0
Bridger (W)	50TH	0.0000	.5476	3.8	5.0	5.0	4.8	6.0	4.6	5.0	4.6
Canyonlands NP	50TH	-.0432	.1994	6.5	5.7	8.0	7.8	7.0	6.2	6.5	4.6
Chiricahua (W)	50TH	0.0099	.3598	8.5	8.0	8.7	7.2	8.0	10.0	9.5	8.2
Crater Lake NP	50TH	0.0684	.1375	3.7	4.2	4.9	7.0	7.5	5.7	6.1	4.7
Denali NP	50TH	0.0366	.3598	3.2	5.6	7.7	3.8	4.2	4.5	4.7	4.3
Glacier NP	50TH	0.0169	.0543	13.1	14.2	16.0	14.9	18.1	15.1	15.5	15.6
Grand Canyon NP	50TH	-.0021	.5476	5.4	6.1	7.1	6.7	7.1	6.0	6.6	5.7
Great Sand Dunes (W)	50TH	-.0052	.4524	5.9	6.9	6.1	5.9	7.0	6.0	6.7	5.7
Great Smoky Mtns NP	50TH	0.0222	.3598	40.8	50.0	49.7	45.7	57.0	60.5	41.4	49.1
Guadalupe Mtns NP	50TH	0.0107	.3598	10.7	10.6	12.0	10.6	10.8	10.2	13.5	11.9
Lassen Volcanic NP	50TH	0.0217	.1994	4.2	3.8	3.4	2.8	4.6	5.0	4.7	4.3
Mesa Verde NP	50TH	0.0146	.3598	6.1	5.7	6.5	7.4	6.6	6.4	8.4	5.6
Mt. Rainier NP	50TH	0.0183	.3598	24.1	21.1	19.6	32.0	34.0	33.6	25.5	22.7

**Table A-12.** Trends From IMPROVE Monitoring Sites, 1988–1995 (continued)**LIGHT EXTINCTION DUE TO SULFATE ( $Mm^{-1}$ )**

SITE	PERCENTILE	SLOPE	LEVEL	OBSERVED SIGNIFICANCE		1988	1989	1990	1991	1992	1993	1994	1995
Petrified Forest NP	50TH	-.0258	.2742	6.9	7.7	9.4	9.2	8.5	6.9	8.1	6.0		
Pinnacles (W)	50TH	-.0050	.5476	8.3	12.5	14.3	12.5	11.7	11.4	9.1	9.1	13.6	
Pt. Reyes NS	50TH	-.0101	.2742	18.9	23.3	21.9	22.9	19.6	18.8	22.0	19.1		
Redwood NP	50TH	0.0099	.4524	18.2	22.1	24.1	20.8	20.8	15.5	21.4	23.5		
Rocky Mtns NP	50TH	-.0100	.3598	6.0	5.9	7.1	6.1	7.1	5.9	6.5	4.8		
San Gorgonio (W)	50TH	0.0164	.3598	8.5	7.2	7.2	11.8	9.4	11.5	8.9	8.8		
Shenandoah NP	50TH	-.0062	.2742	71.0	58.6	63.1	70.0	73.2	72.7	57.4	56.7		
Tonto NM	50TH	0.0021	.5476	6.7	8.2	6.7	8.7	7.8	7.5	8.0	6.9		
Washington, DC	50TH	0.0231	.2742	51.3	61.3	54.9	83.0	75.8	79.7	64.7	55.9		
Weminuche (W)	50TH	-.0039	.5476	5.9	7.2	6.9	6.2	7.6	6.6	7.4	5.1		
Yellowstone NP	50TH	-.0022	.4524	4.4	4.5	4.6	4.9	5.2	4.6	4.4	3.9		
Yosemite NP	50TH	0.0390	.0894	5.3	6.1	7.1	7.7	8.5	7.2	6.4	7.6		
Acadia NP	90TH	-.0097	.3598	88.6	101.5	79.8	78.2	102.1	97.5	100.2	73.3		
Badlands (W)	90TH	0.0166	.3598	19.7	26.2	22.7	24.7	37.4	27.2	22.5	24.0		
Bandelier (W)	90TH	0.0337	.1375	9.2	15.2	6.1	8.7	10.9	10.0	11.3	11.6		
Big Bend NP	90TH	0.0019	.5476	22.6	21.9	24.2	20.6	24.7	19.9	27.6	21.3		
Bryce Canyon NP	90TH	0.0086	.4524	11.0	11.9	10.5	9.3	11.6	9.9	11.0	12.3		
Brider (W)	90TH	-.0155	.1375	7.1	8.6	7.3	7.2	9.5	6.8	6.4	6.9		
Canyonlands NP	90TH	-.0229	.0894	9.8	8.8	10.8	7.6	9.4	8.7	8.0	8.4		
Chiricahua (W)	90TH	-.0034	.4524	16.0	13.5	12.9	10.4	13.3	14.6	12.5	15.8		
Crater Lake NP	90TH	0.0145	.3598	9.2	13.8	10.4	9.6	13.7	13.4	10.7	11.2		
Denali NP	90TH	-.0088	.4524	10.8	10.4	13.5	6.5	10.1	6.4	11.6	11.4		
Glacier NP	90TH	-.0159	.4524	16.2	23.1	20.0	19.7	25.7	20.9	18.1	18.4		
Grand Canyon NP	90TH	-.0061	.4524	9.7	9.4	9.8	8.6	10.1	8.4	10.0	9.0		
Great Sand Dunes (W)	90TH	0.0040	.5476	10.6	9.2	7.6	7.0	9.5	9.5	8.2	9.9		
Great Smoky Mtns NP	90TH	0.0189	.1994	84.7	120.5	153.0	127.4	129.9	110.7	125.1	134.5		
Guadalupe Mtns NP	90TH	-.0155	.3598	20.7	25.0	15.2	18.0	19.5	18.9	19.5	18.3		
Lassen Volcanic NP	90TH	0.0227	.3598	8.1	11.0	7.7	4.9	11.1	9.0	10.2	9.6		
Mesa Verde NP	90TH	-.0016	.5476	10.1	11.6	10.3	8.3	11.0	10.2	10.1	10.6		
Mt. Rainier NP	90TH	-.0201	.2742	45.2	65.9	93.1	65.4	66.6	55.4	63.0	51.2		
Petrified Forest NP	90TH	-.0049	.5476	11.5	11.1	11.9	10.2	13.6	10.3	10.2	13.2		
Pinnacles (W)	90TH	0.0029	.5476	16.2	18.6	21.3	19.0	20.4	16.1	19.4	18.3		
Pt. Reyes NS	90TH	0.0419	.0894	23.5	29.8	29.1	30.9	41.5	28.9	30.3	36.1		
Redwood NP	90TH	-.0200	.2742	31.8	42.4	44.3	43.5	42.0	30.9	34.0	37.2		
Rocky Mtns NP	90TH	-.0098	.4524	9.2	11.8	9.4	9.5	9.0	10.8	8.0	10.5		
San Gorgonio (W)	90TH	-.0300	.0543	17.7	17.1	16.7	16.7	21.1	17.1	14.4	14.2		
Shenandoah NP	90TH	0.0170	.1994	151.3	171.3	183.9	200.8	190.9	163.3	180.9	184.9		
Tonto NM	90TH	-.0208	.1994	12.3	10.6	11.7	11.7	10.7	9.3	9.9	11.7		
Washington, DC	90TH	0.0286	.3598	103.4	107.5	85.4	171.9	170.8	141.8	133.5	117.6		
Weminuche (W)	90TH	0.0078	.4524	8.4	12.2	9.8	8.1	10.4	10.8	8.9	10.1		
Yellowstone NP	90TH	-.0054	.5476	4.5	6.7	5.7	5.8	6.1	5.0	5.8	5.4		
Yosemite NP	90TH	-.0046	.4524	14.2	14.7	12.8	12.8	16.7	14.9	12.6	13.0		

\* Denotes that the slope is significant at the .05 significance level.

NP = National Park

W = Wilderness

NS = National Seashore

NM = National Monument

**Table A-12.** Trends From IMPROVE Monitoring Sites, 1988–1995**LIGHT EXTINCTION DUE TO ORGANIC CARBON (Mm<sup>-1</sup>)**

SITE	PERCENTILE	SLOPE	LEVEL	OBSERVED SIGNIFICANCE		1988	1989	1990	1991	1992	1993	1994	1995
				*	**								
Acadia NP	10TH	-.1079*	.0156	4.6	4.4	4.9	4.4	2.6	3.4	2.8	2.3		
Badlands (W)	10TH	-.1399*	.0009	5.2	4.1	4.3	2.9	2.3	2.3	2.2	2.0		
Bandelier (W)	10TH	-.0995*	.0156	4.0	4.2	4.6	3.8	2.7	3.2	2.7	2.0		
Big Bend NP	10TH	-.0786*	.0305	4.5	3.7	4.6	2.9	1.9	2.7	2.7	2.6		
Bryce Canyon NP	10TH	-.1209*	.0156	2.6	2.7	3.2	2.1	1.5	1.4	1.5	1.3		
Bridger (W)	10TH	-.1263	.0894	2.6	2.6	3.5	1.4	0.9	1.1	1.4	1.2		
Canyonlands NP	10TH	-.0908*	.0305	2.7	2.8	3.8	2.5	1.4	1.9	1.8	1.6		
Chiricahua (W)	10TH	-.1156*	.0305	4.2	3.1	3.4	2.3	1.8	1.8	1.8	2.1		
Crater Lake NP	10TH	-.1479*	.0071	2.9	3.5	3.7	1.6	1.6	1.3	1.2	1.1		
Denali NP	10TH	-.2124*	.0071	3.3	2.3	3.2	2.5	0.9	1.0	0.9	0.8		
Glacier NP	10TH	-.0875*	.0156	6.1	5.2	6.2	5.6	4.0	4.7	3.6	3.6		
Grand Canyon NP	10TH	-.1196*	.0305	2.2	2.8	3.7	2.6	1.8	1.6	1.4	1.6		
Great Sand Dunes (W)	10TH	-.1621*	.0028	4.3	4.1	5.4	3.7	2.4	2.0	2.1	1.5		
Great Smoky Mtns NP	10TH	-.0756*	.0002	7.4	6.7	6.7	5.9	5.0	4.9	4.7	4.4		
Guadalupe Mtns NP	10TH	-.1035*	.0071	4.5	4.6	4.2	2.5	2.6	2.7	2.4	2.3		
Lassen Volcanic NP	10TH	-.1024*	.0156	3.3	3.4	4.5	2.7	2.2	2.3	2.2	1.6		
Mesa Verde NP	10TH	-.1209*	.0071	3.5	2.8	3.4	2.6	1.9	1.4	2.1	1.6		
Mt. Rainier NP	10TH	-.0974*	.0305	3.9	3.3	4.1	3.9	3.5	2.9	2.0	2.4		
Petrified Forest NP	10TH	-.1108*	.0156	3.5	4.3	4.7	4.2	3.1	2.4	2.8	2.0		
Pinnacles (W)	10TH	-.0865*	.0071	4.6	4.6	6.0	3.9	3.0	3.5	3.0	2.7		
Pt. Reyes NS	10TH	-.0904*	.0028	3.7	3.5	3.2	3.0	2.4	2.0	2.0	2.1		
Redwood NP	10TH	-.1567*	.0028	4.1	3.5	4.5	3.1	2.3	1.8	1.6	1.7		
Rocky Mtns NP	10TH	-.1441*	.0071	4.2	2.6	4.0	1.7	2.1	1.5	1.7	1.4		
San Gorgonio (W)	10TH	-.1042*	.0305	3.9	2.5	4.9	2.1	1.8	2.3	1.5	1.9		
Shenandoah NP	10TH	-.1024*	.0156	8.0	5.1	5.9	4.3	3.1	4.2	3.2	3.8		
Tonto NM	10TH	-.0988*	.0028	6.4	4.4	5.0	3.2	3.3	3.1	2.8	2.9		
Washington, DC	10TH	-.0403	.0543	10.1	11.4	10.4	9.7	9.3	11.1	9.4	6.0		
Weminuche (W)	10TH	-.1479*	.0071	3.6	3.0	3.1	2.1	1.5	1.6	1.7	1.3		
Yellowstone NP	10TH	-.1696*	.0071	5.4	3.6	5.6	4.0	2.5	1.9	1.9	1.7		
Yosemite NP	10TH	-.1100	.0894	3.4	2.7	5.0	2.2	1.6	2.2	1.5	2.3		
Acadia NP	50TH	-.0487*	.0305	6.8	6.8	6.0	6.8	5.5	5.6	5.8	4.7		
Badlands (W)	50TH	-.0940*	.0028	6.0	6.2	6.2	5.6	4.1	3.9	3.9	3.4		
Bandelier (W)	50TH	-.0955*	.0156	6.6	5.9	6.6	6.9	4.5	4.1	3.6	3.5		
Big Bend NP	50TH	-.0719*	.0009	7.2	6.5	6.2	6.0	4.4	4.9	4.8	4.3		
Bryce Canyon NP	50TH	-.0916*	.0071	4.9	4.8	4.6	4.4	2.6	2.9	2.8	2.8		
Bridger (W)	50TH	-.1305*	.0028	4.9	4.3	5.4	4.2	3.4	2.4	2.8	2.3		
Canyonlands NP	50TH	-.1174*	.0305	5.3	4.6	6.0	4.6	2.8	3.2	3.6	2.3		
Chiricahua (W)	50TH	-.1162*	.0028	6.6	5.0	5.2	4.7	3.2	3.2	2.6	3.0		
Crater Lake NP	50TH	-.1082	.0894	4.8	6.0	7.1	4.9	3.9	2.7	5.6	2.6		
Denali NP	50TH	-.1926*	.0028	3.5	3.3	3.6	2.8	1.8	1.2	1.5	1.1		
Glacier NP	50TH	-.0597*	.0009	12.7	11.4	11.7	10.8	10.2	9.3	9.7	6.8		
Grand Canyon NP	50TH	-.0750*	.0071	4.3	4.1	5.2	4.3	3.0	3.0	2.8	2.6		
Great Sand Dunes (W)	50TH	-.1072*	.0028	5.8	5.1	5.7	5.5	3.9	3.0	3.4	2.8		
Great Smoky Mtns NP	50TH	-.0445*	.0305	10.8	11.9	12.9	10.4	9.9	10.7	8.1	9.3		
Guadalupe Mtns NP	50TH	-.0738*	.0028	6.7	6.0	5.9	5.0	3.3	4.7	4.3	4.0		
Lassen Volcanic NP	50TH	-.0978*	.0305	5.0	6.5	7.3	5.5	5.0	3.8	4.0	3.6		
Mesa Verde NP	50TH	-.1156*	.0156	7.0	4.1	4.5	4.5	3.0	2.9	3.2	2.5		
Mt. Rainier NP	50TH	-.0678*	.0028	9.4	9.4	11.7	9.0	9.0	8.6	7.0	5.5		

**Table A-12.** Trends From IMPROVE Monitoring Sites, 1988–1995 (continued)**LIGHT EXTINCTION DUE TO ORGANIC CARBON (Mm<sup>-1</sup>)**

SITE	PERCENTILE	SLOPE	LEVEL	OBSERVED SIGNIFICANCE		1988	1989	1990	1991	1992	1993	1994	1995
Petrified Forest NP	50TH	-.0893*	.0028	6.8	5.3	6.2	6.0	4.5	3.8	4.2	3.5		
Pinnacles (W)	50TH	-.0824*	.0071	9.6	9.5	10.1	7.8	7.0	7.8	6.1	5.6		
Pt. Reyes NS	50TH	-.1719*	.0156	5.3	6.8	8.1	6.2	4.0	3.0	3.4	2.4		
Redwood NP	50TH	-.1247*	.0156	5.6	5.6	7.3	6.0	5.1	4.6	4.0	2.6		
Rocky Mtns NP	50TH	-.1371*	.0002	6.1	5.9	5.5	4.8	3.9	3.1	3.7	2.2		
San Gorgonio (W)	50TH	-.0527	.1375	10.1	10.0	9.3	11.4	7.0	11.5	7.6	6.1		
Shenandoah NP	50TH	-.0524*	.0071	11.1	9.3	11.6	9.7	8.8	7.9	8.1	7.7		
Tonto NM	50TH	-.0604*	.0028	7.2	6.5	7.0	5.5	5.8	5.4	4.1	5.1		
Washington, DC	50TH	0.0031	.5476	15.8	18.0	16.9	18.5	16.2	19.2	18.0	12.1		
Weminuche (W)	50TH	-.1176*	.0009	5.2	4.7	4.5	4.6	3.0	2.7	2.8	2.3		
Yellowstone NP	50TH	-.0996*	.0305	5.0	6.3	6.6	5.9	4.4	3.5	4.4	3.1		
Yosemite NP	50TH	-.0181	.3598	6.7	7.7	8.2	7.8	7.1	6.4	5.6	7.9		
Acadia NP	90TH	-.0291	.1375	17.6	17.2	13.2	16.6	12.1	14.3	14.2	14.4		
Badlands (W)	90TH	-.0456	.2742	12.1	8.7	9.8	11.0	6.7	5.6	12.7	8.2		
Bandelier (W)	90TH	-.0550*	.0156	9.3	8.8	8.1	8.0	8.9	8.1	6.7	6.0		
Big Bend NP	90TH	-.0321	.1375	11.3	13.0	8.2	10.6	6.8	9.9	8.9	9.4		
Bryce Canyon NP	90TH	-.0589	.0543	6.8	7.0	6.5	5.7	5.3	7.1	5.5	4.5		
Brider (W)	90TH	-.0674	.0894	9.6	7.0	7.8	6.9	6.9	4.7	8.2	5.4		
Canyonlands NP	90TH	-.1195*	.0028	8.7	8.0	7.1	6.3	4.4	4.7	4.1	4.4		
Chiricahua (W)	90TH	-.0327	.2742	9.3	6.7	8.0	6.9	7.1	7.3	7.5	6.0		
Crater Lake NP	90TH	-.0568	.3598	12.7	11.4	13.6	11.5	6.9	7.9	15.4	8.3		
Denali NP	90TH	-.0643	.3598	5.0	4.9	6.6	12.6	2.6	9.1	5.6	2.0		
Glacier NP	90TH	-.0034	.4524	19.3	25.2	27.4	23.0	18.9	23.4	25.0	20.0		
Grand Canyon NP	90TH	-.0631*	.0028	7.9	7.7	7.8	5.6	5.3	6.9	4.9	4.8		
Great Sand Dunes (W)	90TH	-.0951*	.0071	9.2	7.8	6.9	6.5	4.3	4.9	6.1	4.6		
Great Smoky Mtns NP	90TH	-.0375	.1994	28.0	17.3	22.1	21.5	15.5	19.7	18.6	19.8		
Guadalupe Mtns NP	90TH	-.0752*	.0071	9.2	9.1	7.4	7.8	5.9	6.7	6.8	5.1		
Lassen Volcanic NP	90TH	-.0306	.0894	11.1	12.4	10.1	9.4	9.2	10.1	10.6	8.7		
Mesa Verde NP	90TH	-.0760	.0543	7.9	7.2	8.0	5.8	3.9	5.6	5.8	4.6		
Mt. Rainier NP	90TH	-.0532*	.0305	21.4	23.3	26.0	21.4	22.0	19.4	18.1	15.7		
Petrified Forest NP	90TH	-.0958*	.0028	10.4	8.6	8.2	7.3	6.3	6.7	4.9	6.5		
Pinnacles (W)	90TH	-.0584*	.0156	13.9	18.6	16.0	14.3	12.3	12.9	11.0	11.8		
Pt. Reyes NS	90TH	-.1305	.0543	11.2	19.0	15.4	12.9	9.0	12.9	7.1	7.3		
Redwood NP	90TH	-.0590*	.0071	16.7	15.0	13.9	11.4	13.3	12.3	6.7	11.9		
Rocky Mtns NP	90TH	-.0751*	.0156	9.5	10.9	9.6	7.6	6.9	6.5	8.7	6.1		
San Gorgonio (W)	90TH	-.0594*	.0071	20.5	19.2	17.9	17.1	19.4	15.2	15.6	10.3		
Shenandoah NP	90TH	-.0215	.1375	26.9	18.0	20.2	19.8	16.8	11.4	18.9	19.4		
Tonto NM	90TH	-.0236	.4524	10.3	15.0	7.7	8.5	9.2	13.9	6.0	10.3		
Washington, DC	90TH	-.0032	.5476	31.7	22.8	29.2	28.5	24.8	35.7	30.5	24.8		
Weminuche (W)	90TH	-.1003*	.0071	9.0	8.4	7.9	5.7	4.7	4.7	4.8	4.7		
Yellowstone NP	90TH	-.0718	.0894	12.7	10.2	10.7	9.3	9.5	7.5	15.6	7.0		
Yosemite NP	90TH	0.0534	.3598	22.2	14.5	16.6	16.5	18.4	12.3	21.0	21.9		

\* Denotes that the slope is significant at the .05 significance level.

NP = National Park

W = Wilderness

NS = National Seashore

NM = National Monument

**Table A-12.** Trends From IMPROVE Monitoring Sites, 1988–1995**DECIVIEW**

SITE	PERCENTILE	SLOPE	LEVEL	OBSERVED SIGNIFICANCE							
				1988	1989	1990	1991	1992	1993	1994	1995
Acadia NP	10TH	-.0294*	.0305	13.0	14.1	14.2	13.4	11.7	12.6	11.3	11.3
Badlands (W)	10TH	-.0229*	.0305	10.3	9.5	9.7	9.7	10.0	9.5	8.9	7.8
Bandelier (W)	10TH	-.0404	.0894	8.1	9.7	10.4	9.3	8.5	8.9	8.3	6.0
Big Bend NP	10TH	-.0237	.0894	10.1	10.3	10.7	9.5	8.2	9.6	8.6	9.1
Bryce Canyon NP	10TH	-.0592	.0894	6.6	5.8	6.8	7.2	6.7	6.2	5.2	4.2
Bridger (W)	10TH	-.0481	.0543	5.0	5.4	6.6	5.0	5.3	4.3	4.9	3.2
Canyonlands NP	10TH	-.0552	.0543	7.1	7.9	9.0	8.3	6.9	7.4	6.6	4.9
Chiricahua (W)	10TH	-.0210*	.0305	8.2	7.9	8.3	8.0	7.2	7.8	7.1	7.3
Crater Lake NP	10TH	-.0395	.0543	5.8	6.5	6.6	6.5	6.3	5.1	5.5	3.8
Denali NP	10TH	-.0587*	.0071	5.4	5.0	7.6	5.3	4.5	4.2	4.2	3.7
Glacier NP	10TH	-.0163	.2742	10.9	11.4	12.2	12.7	12.5	11.7	10.3	9.7
Grand Canyon NP	10TH	-.0145	.3598	5.8	6.1	8.1	7.2	7.1	5.9	5.3	6.1
Great Sand Dunes (W)	10TH	-.0908*	.0071	8.6	8.0	9.7	9.1	7.5	6.9	6.2	4.6
Great Smoky Mtns NP	10TH	-.0120*	.0305	15.9	16.4	16.1	16.2	15.4	15.6	15.0	15.2
Guadalupe Mtns NP	10TH	-.0168	.1375	10.0	11.1	10.3	8.4	9.3	9.9	8.6	9.6
Lassen Volcanic NP	10TH	-.0585	.0543	5.6	6.3	7.1	4.7	6.1	4.9	4.7	4.0
Mesa Verde NP	10TH	-.0686	.0894	7.7	6.8	9.2	8.1	7.0	6.5	7.0	4.5
Mt. Rainier NP	10TH	-.0400	.2742	9.0	8.5	10.1	10.3	11.9	9.3	7.4	6.4
Petrified Forest NP	10TH	-.0575*	.0305	8.4	10.3	10.4	10.2	8.8	8.0	8.1	6.7
Pinnacles (W)	10TH	-.0405*	.0156	11.6	11.9	14.1	10.8	10.2	11.5	9.4	9.2
Pt. Reyes NS	10TH	-.0221	.1375	11.6	12.2	14.5	12.7	11.9	12.6	11.3	10.2
Redwood NP	10TH	-.0357*	.0156	10.6	9.6	11.4	9.6	10.1	8.6	8.4	8.3
Rocky Mtns NP	10TH	-.0241	.1375	6.8	5.8	6.6	5.9	6.2	6.0	6.1	4.0
San Gorgonio (W)	10TH	-.0373	.1994	8.4	7.9	11.3	7.8	6.8	7.9	6.0	8.1
Shenandoah NP	10TH	-.0085	.1994	18.4	17.0	17.6	18.0	15.8	17.9	15.8	17.2
Tonto NM	10TH	-.0302*	.0156	10.2	10.0	10.9	9.3	9.5	8.8	8.1	8.9
Washington, DC	10TH	-.0004	.4524	21.7	22.3	22.6	22.2	22.3	23.7	22.2	19.3
Weminuche (W)	10TH	0.0051	.5476	5.7	6.1	6.8	7.4	7.2	6.0	7.2	4.3
Yellowstone NP	10TH	-.0848*	.0071	8.3	7.7	8.9	8.0	6.6	5.2	5.4	5.0
Yosemite NP	10TH	-.0115	.2742	5.9	5.4	8.9	5.8	6.3	5.9	4.9	5.7
Acadia NP	50TH	-.0169	.1375	18.1	20.3	18.7	18.9	17.8	18.1	18.2	16.7
Badlands (W)	50TH	-.0130	.0543	14.8	15.3	14.7	15.1	14.9	13.4	13.9	13.8
Bandelier (W)	50TH	-.0386*	.0071	11.9	12.4	12.7	12.2	11.6	11.3	10.6	9.1
Big Bend NP	50TH	-.0049	.1375	14.4	15.0	14.4	14.1	14.1	14.2	14.5	13.9
Bryce Canyon NP	50TH	-.0183	.0543	11.5	11.5	10.6	11.5	10.5	10.6	11.1	8.8
Bridger (W)	50TH	-.0285	.1375	9.0	9.1	10.2	9.6	9.9	8.1	8.6	7.4
Canyonlands NP	50TH	-.0257	.0543	10.9	10.7	12.4	12.0	10.8	10.7	10.7	8.4
Chiricahua (W)	50TH	-.0190*	.0156	12.4	11.9	12.4	11.6	11.0	11.9	11.4	10.7
Crater Lake NP	50TH	0.0033	.5476	8.8	10.3	11.1	11.7	11.1	9.3	11.4	8.1
Denali NP	50TH	-.0517*	.0156	8.1	8.9	10.1	7.5	6.7	6.6	7.4	5.9
Glacier NP	50TH	-.0095	.1994	16.6	16.3	16.9	17.0	17.0	15.8	16.3	14.8
Grand Canyon NP	50TH	-.0269	.0543	10.2	10.8	11.9	11.2	10.7	10.1	10.1	9.3
Great Sand Dunes (W)	50TH	-.0366*	.0156	11.1	12.1	12.0	11.6	11.2	9.7	10.0	8.7
Great Smoky Mtns NP	50TH	0.0051	.4524	21.6	22.3	22.5	21.5	23.0	23.5	20.3	22.1
Guadalupe Mtns NP	50TH	-.0071	.3598	13.8	14.4	15.2	13.2	12.3	13.2	14.1	13.3
Lassen Volcanic NP	50TH	-.0204*	.0305	10.9	10.6	10.8	9.4	10.1	9.8	10.1	9.0
Mesa Verde NP	50TH	-.0169	.1994	10.8	10.0	10.4	11.2	9.8	10.0	10.6	8.6
Mt. Rainier NP	50TH	0.0020	.5476	17.6	16.9	17.0	18.8	19.4	19.1	17.4	15.8

**Table A-12.** Trends From IMPROVE Monitoring Sites, 1988–1995 (continued)

SITE	PERCENTILE	SLOPE	LEVEL	DECIVIEW									
				OBSERVED SIGNIFICANCE				1988	1989	1990	1991	1992	1993
Petrified Forest NP	50TH	-.0338*	.0305	12.8	13.1	14.0	13.7	12.6	11.4	11.8	10.2		
Pinnacles (W)	50TH	-.0194	.0543	17.1	17.6	18.5	17.1	16.5	17.1	15.3	15.6		
Pt. Reyes NS	50TH	-.0225	.0543	17.4	18.3	19.3	17.9	16.4	16.7	17.1	14.9		
Redwood NP	50TH	-.0123	.0894	15.8	16.5	17.7	16.4	16.2	14.7	15.8	15.4		
Rocky Mtns NP	50TH	-.0183	.0894	11.2	11.4	11.6	11.0	11.6	10.2	11.0	8.6		
San Gorgonio (W)	50TH	-.0089	.1994	18.7	19.6	19.5	20.0	17.5	19.8	18.3	17.2		
Shenandoah NP	50TH	-.0050	.1994	25.3	23.6	24.7	25.2	25.3	25.1	23.9	23.4		
Tonto NM	50TH	-.0195*	.0305	13.4	14.4	13.7	13.5	13.6	13.2	12.4	12.4		
Washington, DC	50TH	0.0023	.3598	24.9	27.4	27.3	28.7	28.4	28.7	27.5	25.4		
Weminuche (W)	50TH	-.0160*	.0305	10.6	11.2	10.8	10.9	10.6	10.2	10.5	8.3		
Yellowstone NP	50TH	-.0383	.0543	10.2	10.8	11.5	11.6	10.4	9.8	9.6	7.9		
Yosemite NP	50TH	0.0006	.5476	12.8	12.9	13.9	14.0	14.4	13.0	11.9	12.9		
Acadia NP	90TH	0.0018	.5476	26.8	27.5	25.8	25.9	27.2	27.3	27.5	25.1		
Badlands (W)	90TH	0.0049	.4524	19.2	18.8	18.8	19.1	21.6	19.4	20.1	18.7		
Bandelier (W)	90TH	-.0082	.4524	14.3	16.5	12.9	14.0	15.0	14.5	14.6	13.4		
Big Bend NP	90TH	-.0012	.3598	19.1	19.5	18.5	19.0	18.1	18.5	19.3	19.0		
Bryce Canyon NP	90TH	-.0062	.1994	14.1	15.0	13.5	13.9	13.9	14.2	13.9	13.0		
Brider (W)	90TH	-.0134	.0543	13.3	13.2	13.3	12.9	13.9	11.5	12.6	11.2		
Canyonlands NP	90TH	-.0292*	.0156	14.6	15.1	15.1	14.6	13.1	13.6	13.4	11.7		
Chiricahua (W)	90TH	-.0033	.1994	16.3	15.2	15.2	15.1	15.1	15.7	15.8	14.9		
Crater Lake NP	90TH	0.0008	.5476	15.6	16.6	16.3	15.9	15.7	16.8	16.8	14.2		
Denali NP	90TH	-.0205	.2742	12.5	12.4	14.8	13.7	11.1	12.5	12.9	10.8		
Glacier NP	90TH	-.0046	.3598	19.9	21.9	21.8	22.0	22.3	21.5	21.4	20.9		
Grand Canyon NP	90TH	-.0114	.1375	13.9	14.9	15.0	13.4	13.6	13.8	13.8	12.9		
Great Sand Dunes (W)	90TH	-.0273	.0894	14.6	15.7	14.5	14.4	12.8	13.2	16.6	12.4		
Great Smoky Mtns NP	90TH	0.0037	.4524	27.3	28.7	30.9	29.7	29.4	28.5	29.2	29.4		
Guadalupe Mtns NP	90TH	-.0115	.0894	18.4	19.3	17.7	17.1	16.8	17.2	18.2	17.0		
Lassen Volcanic NP	90TH	-.0076	.3598	15.8	16.9	14.7	13.1	15.2	15.4	15.9	14.3		
Mesa Verde NP	90TH	-.0058	.2742	13.2	14.2	14.7	12.9	12.4	14.6	13.7	12.8		
Mt. Rainier NP	90TH	-.0123	.2742	23.7	25.7	28.0	25.7	25.8	24.3	24.9	23.1		
Petrified Forest NP	90TH	-.0213*	.0156	15.8	16.4	16.9	15.6	15.3	14.7	14.1	14.9		
Pinnacles (W)	90TH	-.0204*	.0305	20.6	22.8	22.7	21.5	21.7	20.5	20.1	20.1		
Pt. Reyes NS	90TH	-.0126	.2742	22.5	28.2	25.4	23.8	24.9	27.7	23.9	22.0		
Redwood NP	90TH	-.0107	.0894	22.2	22.9	23.0	22.6	22.8	21.1	20.3	21.6		
Rocky Mtns NP	90TH	-.0132	.0543	14.8	16.1	15.5	14.8	14.6	14.9	14.7	14.4		
San Gorgonio (W)	90TH	-.0130	.0543	25.6	26.1	26.7	25.6	26.5	24.8	24.6	22.9		
Shenandoah NP	90TH	0.0029	.3598	31.2	31.5	32.2	32.7	32.4	30.9	31.8	32.0		
Tonto NM	90TH	-.0072	.1994	16.6	18.3	15.8	16.4	16.4	17.0	14.8	16.0		
Washington, DC	90TH	0.0001	.5476	32.0	31.6	31.3	33.9	34.3	34.0	32.7	31.1		
Weminuche (W)	90TH	-.0190*	.0156	13.8	15.3	14.0	14.0	13.2	13.5	13.0	12.7		
Yellowstone NP	90TH	-.0254*	.0305	16.2	16.0	15.6	14.5	15.4	13.5	16.1	13.1		
Yosemite NP	90TH	-.0044	.2742	19.9	18.9	19.9	18.4	19.9	17.9	18.8	19.4		

\* Denotes that the slope is significant at the .05 significance level.

NP = National Park

W = Wilderness

NS = National Seashore

NM = National Monument

**Table A-13.** Condensed Nonattainment Areas List(a)

State	Area Name(b)	Pollutant(c)						Population(d)					
		O <sub>3</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	Pb	NO <sub>2</sub>	O <sub>3</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	Pb	All
1	AK Anchorage	.	1	.	1	.	.	.	222	.	170	.	222
2	AK Fairbanks	.	1	.	.	.	.	.	30	.	.	.	30
3	AK Juneau	.	.	.	1	.	.	.	.	.	12	.	12
4	AL Birmingham	1	.	.	.	.	.	751	.	.	.	.	751
5	AZ Ajo	.	.	1	1	.	.	.	.	6	6	.	6
6	AZ Bullhead City	.	.	.	1	.	.	.	.	.	5	.	5
7	AZ Douglas	.	.	1	1	.	.	.	.	13	13	.	13
8	AZ Miami-Hayden	.	.	2	1	.	.	.	.	3	3	.	3
9	AZ Morenci	.	.	1	.	.	.	.	.	8	.	.	8
10	AZ Nogales	.	.	.	1	.	.	.	.	.	19	.	19
11	AZ Paul Spur	.	.	.	1	.	.	.	.	.	1	.	1
12	AZ Payson	.	.	.	1	.	.	.	.	.	8	.	8
13	AZ Phoenix	1	1	.	1	.	.	2092	2006	.	2122	.	2122
14	AZ Rillito	.	.	.	1	.	.	.	.	.	0	.	0
15	AZ San Manuel	.	.	1	.	.	.	.	.	5	.	.	5
16	AZ Yuma	.	.	.	1	.	.	.	.	.	54	.	54
17	CA Chico	.	1	.	.	.	.	.	72	.	.	.	72
18	CA Imperial Valley	.	.	.	1	.	.	.	.	.	92	.	92
19	CA Lake Tahoe South Shore	.	1	.	.	.	.	.	30	.	.	.	30
20	CA Los Angeles-South Coast Air Basin	1	1	.	1	.	1(e)	13000	13000	.	13000	.	13000
21	CA Mono Basin (in Mono Co.)	.	.	.	1	.	.	.	.	.	0	.	0
22	CA Owens Valley	.	.	.	1	.	.	.	.	.	18	.	18
23	CA Sacramento Metro	1	1	.	1	.	.	1639	1097	.	1041	.	1639
24	CA San Diego	1	1	.	.	.	.	2498	2348	.	.	.	2498
25	CA San Francisco-Oakland-San Jose	.	1(f)	.	.	.	.	3630	.	.	.	.	3630
26	CA San Joaquin Valley	1	3	.	1	.	.	2742	946	.	2742	.	2742
27	CA Santa Barbara-Santa Maria-Lompoc	1	.	.	.	.	.	370	.	.	.	.	370
28	CA Searles Valley	.	.	.	1	.	.	.	.	.	30	.	30
29	CA Southeast Desert Modified AQMA	1	.	.	2	.	.	384	.	.	349	.	384
30	CA Ventura Co.	1	.	.	.	.	.	669	.	.	.	.	669
31	CO Aspen	.	.	.	1	.	.	.	.	.	5	.	5
32	CO Canon City	.	.	.	1	.	.	.	.	.	12	.	12
33	CO Colorado Springs	.	1	.	.	.	.	.	353	.	.	.	353
34	CO Denver-Boulder	.	1	.	1	.	.	1800	.	1836	.	1836	.
35	CO Fort Collins	.	1	.	.	.	.	.	106	.	.	.	106
36	CO Lamar	.	.	.	1	.	.	.	.	.	8	.	8
37	CO Longmont	.	1	.	.	.	.	.	52	.	.	.	52
38	CO Pagosa Springs	.	.	.	1	.	.	.	.	.	1	.	1
39	CO Steamboat Springs	.	.	.	1	.	.	.	.	.	6	.	6
40	CO Telluride	.	.	.	1	.	.	.	.	.	1	.	1
41	CT Greater Connecticut	1	.	.	1	.	.	2470	.	126	.	2470	.
42	DC-MD-VA Washington	1	.	.	.	.	.	3923	.	.	.	.	3923
43	DE Sussex Co	1	.	.	.	.	.	113	.	.	.	.	113
44	GA Atlanta	1	.	.	.	.	.	2653	.	.	.	.	2653
45	GA Muscogee Co. (Columbus)	.	.	.	.	1	.	.	.	.	179	179	.
46	GU Piti Power Plant	.	.	1	.	.	.	.	.	0	.	.	0
47	GU Tanguisson Power Plant	.	.	1	.	.	.	.	.	0	.	.	0
48	IA Muscatine Co.	.	.	1	.	.	.	.	.	23	.	.	23
49	ID Boise	.	.	.	1	.	.	.	.	.	125	.	125
50	ID Bonner Co.(Sandpoint )	.	.	.	1	.	.	.	.	.	26	.	26
51	ID Pocatello	.	.	.	1	.	.	.	.	.	46	.	46
52	ID Shoshone Co.	.	.	.	2	.	.	.	.	.	13	.	13
53	IL-IN Chicago-Gary-Lake County	1	.	1	3	.	.	7887	.	475	625	.	7887
54	IN Evansville	1	.	.	.	.	.	165	.	.	.	.	165

**Table A-13.** Condensed Nonattainment Areas List(a) (continued)

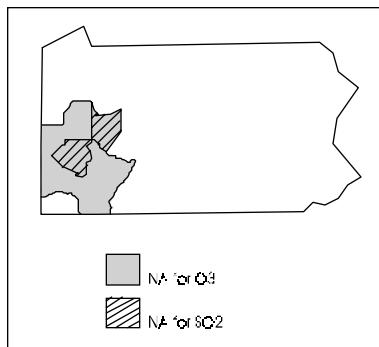
State	Area Name(b)	Pollutant(c)						Population(d)					
		O <sub>3</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	Pb	NO <sub>2</sub>	O <sub>3</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	Pb	All
55 IN	Marion Co. (Indianapolis)	.	.	.	.	1(g)	.	.	.	.	.	16	16
56 IN	Vermillion Co. (Terre Haute)	.	.	1	.	.	.	.	.	.	17	.	17
57 KY	Boyd Co. (Ashland)	.	.	1(h)	.	.	.	.	.	51	.	.	51
58 KY	Muhlenberg Co.	.	.	1	.	.	.	.	.	31	.	.	31
59 KY-IN	Louisville	1	.	.	.	.	.	834	.	.	.	.	834
60 LA	Baton Rouge	1	.	.	.	.	.	559	.	.	.	.	559
61 MA	Springfield (W. Mass)	1	.	.	.	.	.	812	.	.	.	.	812
62 MA-NH	Boston-Lawrence-Worcester	1	.	.	.	.	.	5507	.	.	.	.	5507
63 MD	Baltimore	1	.	.	.	.	.	2348	.	.	.	.	2348
64 MD	Kent and Queen Anne Cos.	1	.	.	.	.	.	52	.	.	.	.	52
65 ME	Knox and Lincoln Cos.	1	.	.	.	.	.	67	.	.	.	.	67
66 ME	Lewiston-Auburn	1	.	.	.	.	.	221	.	.	.	.	221
67 ME	Portland	1	.	.	.	.	.	441	.	.	.	.	441
68 MI	Muskegon	1	.	.	.	.	.	159	.	.	.	.	159
69 MN	Minneapolis-St. Paul	.	1	.	1	.	.	.	2310	.	272	.	2310
70 MN	Olmsted Co. (Rochester)	.	.	1	.	.	.	.	.	71	.	.	71
71 MO	Dent	.	.	.	.	1	.	.	.	.	.	2	2
72 MO	Liberty-Arcadia	.	.	.	.	1	.	.	.	.	.	2	2
73 MO-IL	St. Louis	1	.	.	1(i)	1(j)	.	2390	.	.	32	2	2390
74 MT	Butte	.	.	.	1	.	.	.	.	.	33	.	33
75 MT	Columbia Falls	.	.	.	1	.	.	.	.	.	2	.	2
76 MT	Kalispell	.	.	.	1	.	.	.	.	.	11	.	11
77 MT	Lame Deer	.	.	.	1	.	.	.	.	.	0	.	0
78 MT	Lewis & Clark (E. Helena)	.	.	1	.	1(k)	.	.	.	2	.	2	2
79 MT	Libby	.	.	.	1	.	.	.	.	.	2	.	2
80 MT	Missoula	.	1	.	1	.	.	.	43	.	43	.	43
81 MT	Polson	.	.	.	1	.	.	.	.	.	3	.	3
82 MT	Ronan	.	.	.	1	.	.	.	.	.	1	.	1
83 MT	Thompson Falls	.	.	.	1	.	.	.	.	.	1	.	1
84 MT	Whitefish	.	.	.	1	.	.	.	.	.	3	.	3
85 MT	Yellowstone Co. (Laurel)	.	.	1	.	.	.	.	.	5	.	.	5
86 NE	Douglas Co. (Omaha)	.	.	.	.	1	.	.	.	.	1	1	1
87 NH	Manchester	1	.	.	.	.	.	222	.	.	.	.	222
88 NH	Portsmouth-Dover-Rochester	1	.	.	.	.	.	183	.	.	.	.	183
89 NJ	Atlantic City	1	.	.	.	.	.	319	.	.	.	.	319
90 NM	Anthony	.	.	.	1	.	.	.	.	.	1	.	1
91 NM	Grant Co.	.	.	1	.	.	.	.	.	27	.	.	27
92 NM	Sunland Park	1(l)	.	.	.	.	.	8	.	.	.	.	8
93 NV	Central Steptoe Valley	.	.	1	.	.	.	.	.	2	.	.	2
94 NV	Las Vegas	.	1	.	1	.	.	.	258	.	741	.	741
95 NV	Reno	1	1	.	1	.	.	255	134	.	254	.	255
96 NY	Albany-Schenectady-Troy	1	.	.	.	.	.	874	.	.	.	.	874
97 NY	Buffalo-Niagara Falls	1	.	.	.	.	.	1189	.	.	.	.	1189
98 NY	Essex Co. (Whiteface Mtn.)	1	.	.	.	.	.	1	.	.	.	.	1
99 NY	Jefferson Co.	1	.	.	.	.	.	111	.	.	.	.	111
100 NY	Poughkeepsie	1	.	.	.	.	.	259	.	.	.	.	259
101 NY-NJ-CT	New York-N. New Jersey-Long Island	1	1	.	1	.	.	17943	13155	.	1487	.	17943
102 OH	Cleveland-Akron-Lorain	.	.	3	1	.	.	.	.	1898	1412	.	1898
103 OH	Coshocton Co.	.	.	1	.	.	.	.	.	35	.	.	35
104 OH	Gallia Co.	.	.	1	.	.	.	.	.	30	.	.	30
105 OH	Jefferson Co. (Steubenville)	.	.	1	1	.	.	.	.	80	4	.	80
106 OH	Lucas Co. (Toledo)	.	1	.	.	.	.	.	.	462	.	.	462
107 OH-KY	Cincinnati-Hamilton	1	.	.	.	.	.	1705	.	.	.	.	1705
108 OH-PA	Youngstown-Warren-Sharon	1(m)	.	.	.	.	.	121	.	.	.	.	121
109 OR	Grants Pass	.	1	.	1	.	.	17	.	17	.	.	17
110 OR	Klamath Falls	.	1	.	1	.	.	18	.	17	.	.	18

**Table A-13.** Condensed Nonattainment Areas List(a) (continued)

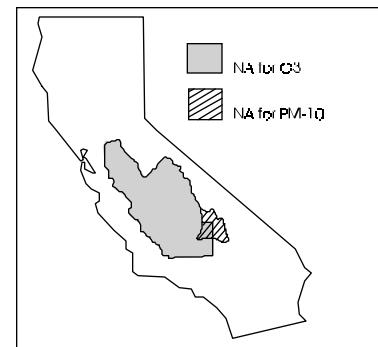
State	Area Name(b)	Pollutant(c)						Population(d)					
		O <sub>3</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	Pb	NO <sub>2</sub>	O <sub>3</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	Pb	All
111	OR LaGrande	.	.	.	1	.	.	.	.	.	11	.	11
112	OR Lakeview	.	.	.	1	.	.	.	.	.	2	.	2
113	OR Medford	.	1	.	1	.	.	.	62	.	63	.	63
114	OR Oakridge	.	.	.	1	.	.	.	.	.	3	.	3
115	OR Springfield-Eugene	.	.	.	1	.	.	.	.	.	157	.	157
116	OR-WA Portland-Vancouver	.	1	.	.	.	.	.	948	.	.	.	948
117	PA Altoona	1	.	.	.	.	.	131	.	.	.	.	131
118	PA Erie	1	.	.	.	.	.	276	.	.	.	.	276
119	PA Harrisburg-Lebanon-Carlisle	1	.	.	.	.	.	588	.	.	.	.	588
120	PA Johnstown	1	.	.	.	.	.	241	.	.	.	.	241
121	PA Lancaster	1	.	.	.	.	.	423	.	.	.	.	423
122	PA Pittsburgh-Beaver Valley	1	.	2	1	.	.	2468	.	446	75	.	2468
123	PA Scranton-Wilkes-Barre	1	.	.	.	.	.	734	.	.	.	.	734
124	PA Warren Co	.	.	2	.	.	.	.	.	22	.	.	22
125	PA York	1	.	.	.	.	.	418	.	.	.	.	418
126	PA-DE-NJ-MD Philadelphia-Wilmington-Trenton	1	.	.	.	.	.	.	6010	.	.	.	6010
127	PA-NJ Allentown-Bethlehem-Easton	1	.	1	.	.	.	687	.	91	.	.	687
128	PR Guaynabo Co.	.	.	.	1	.	.	.	.	85	.	.	85
129	RI Providence (all of RI)	1	.	.	.	.	.	1003	.	.	.	.	1003
130	TN Benton Co.	.	.	1	.	.	.	.	.	14	.	.	14
131	TN Humphreys Co.	.	.	1	.	.	.	.	.	15	.	.	15
132	TN Shelby Co. (Memphis)	.	.	.	.	1(n)	.	.	.	.	826	826	.
133	TN Nashville	.	.	.	.	1(o)	.	.	.	.	81	81	.
134	TN Polk Co.	.	.	1	.	.	.	.	.	13	.	.	13
135	TX Beaumont-Port Arthur	1	.	.	.	.	.	361	.	.	.	.	361
136	TX Dallas-Fort Worth	1	.	.	.	1(p)	.	3561	.	.	264	3561	.
137	TX El Paso	1	1	.	1	.	.	592	54	.	515	.	592
138	TX Houston-Galveston-Brazoria	1	.	.	.	.	.	3731	.	.	.	.	3731
139	UT Ogden	.	1	.	1	.	.	.	63	.	63	.	63
140	UT Salt Lake City	.	.	1	1	.	.	.	.	725	725	.	725
141	UT Tooele Co.	.	.	1	.	.	.	.	.	26	.	.	26
142	UT Utah Co. (Provo)	.	1	.	1	.	.	.	85	.	263	.	263
143	VA Richmond	1	.	.	.	.	.	738	.	.	.	.	738
144	VA Smyth Co. (White Top Mtn.)	1	.	.	.	.	.	0	.	.	.	.	0
145	WA Olympia-Tumwater-Lacey	.	.	.	1	.	.	.	.	63	.	.	63
146	WA Seattle-Tacoma	.	.	.	3	.	.	.	.	730	.	.	730
147	WA Spokane	.	1	.	1	.	.	.	279	.	177	.	279
148	WA Wallula	.	.	.	1	.	.	.	.	.	47	.	47
149	WA Yakima	.	.	.	1	.	.	.	.	.	54	.	54
150	WI Door Co.	1	.	.	.	.	.	26	.	.	.	.	26
151	WI Manitowoc Co.	1	.	.	.	.	.	80	.	.	.	.	80
152	WI Marathon Co. (Wausau)	.	.	1	.	.	.	.	.	115	.	.	115
153	WI Milwaukee-Racine	1	.	.	.	.	.	1735	.	.	.	.	1735
154	WI Oneida Co. (Rhinelander)	.	.	1	.	.	.	.	.	31	.	.	31
155	WV Follansbee	.	.	.	1	.	.	.	.	.	3	.	3
156	WV New Manchester Gr. (in Hancock Co)	.	.	1	.	.	.	.	.	10	.	.	10
157	WV Wier.-Butler-Clay (in Hancock Co)	.	.	1	1	.	.	.	.	25	22	.	25
158	WY Sheridan	.	.	.	1	.	.	.	.	.	13	.	13
	Total	59	29	38	79	10	1	101,739	43,118	4,760	29,939	1,375	119,424

**Table A-13.** Condensed Nonattainment Areas List(a) (continued)**Notes:**

- (a) This is a simplified listing of Classified Nonattainment areas. Unclassified and section 185a nonattainment areas are not included. In certain cases, footnotes are used to clarify the areas involved. For example, the lead nonattainment area listed within the Dallas-Fort Worth ozone nonattainment area is in Frisco, Texas, which is not in Dallas county, but is within the designated boundaries of the ozone nonattainment area. Readers interested in more detailed information should use the official Federal Register citation (40 CFR 81).
- (b) Names of nonattainment areas are listed alphabetically within each state. The largest city determines which state is listed first in the case of multiple-city nonattainment areas. When a larger nonattainment area, such as ozone, contains one or more smaller nonattainment areas, such as PM<sub>10</sub> or lead, the common name for the larger nonattainment area is used. Note that several smaller nonattainment areas may be inside one larger nonattainment area, as is the case in Figure 1. For the purpose of this table, these are considered one nonattainment area and are listed on one line. Occasionally, two nonattainment areas may only partially overlap, as in Figure 2. These are counted as two distinct nonattainment areas and are listed on separate lines.
- (c) The number of nonattainment areas for each of the criteria pollutants is listed.
- (d) Population figures (in 1000s) were obtained from 1990 census data. For nonattainment areas defined as only partial counties, population figures for just the nonattainment area were used when these were available. Otherwise, whole county population figures were used. When a larger nonattainment area encompasses a smaller one, double-counting the population in the "All" column is avoided by only counting the population of the larger nonattainment area.
- (e) NO<sub>2</sub> population same as O<sub>3</sub> and CO.
- (f) Carbon monoxide nonattainment area includes San Francisco county, and parts of Alameda, Contra Costa, Marin, Napa, San Mateo, Santa Clara, Solano, Sonoma counties.
- (g) Lead nonattainment area is a portion of Franklin township, Marion county, Indiana.
- (h) Sulfur dioxide nonattainment area is a portion of Boyd county.
- (i) PM<sub>10</sub> nonattainment area is Granite City, Illinois, in Madison county.
- (j) Lead nonattainment area is Herculaneum, Missouri in Jefferson county.
- (k) Lead nonattainment area is a portion of Lewis and Clark county, Montana.
- (l) Ozone nonattainment area is a portion of Dona Ana county, New Mexico.
- (m) Youngstown has been redesignated for ozone but not the rest of the MSA and the population has been adjusted accordingly.
- (n) Lead nonattainment area is a portion of Shelby county, Tennessee.
- (o) Lead nonattainment area is a portion of Williamson county, Tennessee.
- (p) Lead nonattainment area is Frisco, Texas, in Collin county.



**Figure A-1.** (Multiple NA areas within a larger NA area)  
Two SO<sub>2</sub> areas inside the Pittsburgh-Beaver Valley ozone NA. Counted as one NA area.



**Figure A-2.** (Overlapping NA areas) Searles Valley PM<sub>10</sub> NA partially overlaps the San Joaquin Valley ozone NA. Counted as two NA areas.

**Table A-14.** Maximum Air Quality Concentrations by Metropolitan Statistical Area, 1996

Metropolitan Statistical Area	1990 Population	CO 8-hr (ppm)	Pb OMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> WTD AM (µgm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> AM (ppm)	SO <sub>2</sub> 24-hr (ppm)
ABILENE, TX	119,655	ND	ND	ND	ND	ND	ND	ND	ND
AGUADILLA, PR	128,172	ND	ND	ND	ND	ND	ND	ND	ND
AKRON, OH	657,575	3	0.04	ND	0.11	25	73	0.010	0.042
ALBANY, GA	112,561	ND	ND	ND	ND	IN	21	ND	ND
ALBANY-SCHENECTADY-TROY, NY	861,424	4	0.03	0.015	0.11	21	48	0.005	0.025
ALBUQUERQUE, NM	589,131	7	ND	0.022	0.10	38	94	ND	ND
ALEXANDRIA, LA	131,556	ND	ND	ND	ND	19	42	ND	ND
ALLENTOWN-BETHLEHEM-EASTON, PA	595,081	3	0.08	0.024	0.11	IN	65	0.010	0.035
ALTOONA, PA	130,542	2	ND	0.013	0.10	22	60	0.008	0.033
AMARILLO, TX	187,547	ND	ND	ND	ND	IN	38	ND	ND
ANCHORAGE, AK	226,338	11	ND	ND	ND	34	133	ND	ND
ANN ARBOR, MI	490,058	ND	ND	ND	0.10	ND	ND	ND	ND
ANNISTON, AL	116,034	ND	ND	ND	ND	IN	31	ND	ND
APPLETON-OSHKOSH-NEENAH, WI	315,121	ND	ND	ND	0.09	ND	ND	ND	ND
ARECIBO, PR	155,005	ND	ND	ND	ND	ND	ND	ND	ND
ASHEVILLE, NC	191,774	ND	ND	ND	0.08	25	76	ND	ND
ATHENS, GA	126,262	ND	ND	ND	ND	ND	ND	ND	ND
ATLANTA, GA	2,959,950	4	0.03	0.027	<b>0.14</b>	31	60	0.005	0.022
ATLANTIC-CAPE MAY, NJ	319,416	4	0.01	ND	0.11	IN	40	0.003	0.014
AUGUSTA-AIKEN, GA-SC	415,184	ND	0.00	ND	0.11	19	44	ND	ND
AURORA-ELGIN, IL	356,884	ND	ND	ND	ND	ND	ND	ND	ND
AUSTIN-SAN MARCOS, TX	846,227	3	ND	0.018	0.10	20	32	ND	ND
BAKERSFIELD, CA	543,477	6	0.00	0.029	<b>0.16</b>	<b>54</b>	110	0.003	0.009
BALTIMOREvMD	2,3821,72	4	0.03	0.027	<b>0.13</b>	29	75	0.008	0.028
BANGOR, ME	91,629	ND	ND	ND	0.08	19	34	ND	ND
BARNSTABLE-YARMOUTH, MA	134,954	ND	ND	ND	ND	ND	ND	ND	ND
BATON ROUGE, LA	528,264	5	0.15	0.021	0.12	26	51	0.006	0.024
BEAUMONT-PORT ARTHUR, TX	361,226	2	0.02	0.011	0.12	15	34	0.006	0.044
BELLINGHAM, WA	127,780	ND	ND	ND	0.08	15	37	0.005	0.013
BENTON HARBOR, MI	161,378	ND	ND	ND	<b>0.13</b>	ND	ND	ND	ND
BERGEN-PASSAIC, NJ	1,278,440	4	0.00	0.028	0.11	37	61	0.007	0.026
BILLINGS, MT	113,419	7	ND	ND	ND	28	75	0.014	0.099
BILOXI-GULFPORT-PASCAGOULA, MS	312,368	ND	ND	ND	0.10	18	33	0.003	0.043
BINGHAMTON, NY	264,497	ND	ND	ND	ND	IN	34	ND	ND
BIRMINGHAM, AL	840,140	6	0.13	0.010	<b>0.14</b>	34	100	0.004	0.015
BISMARCK, ND	83,831	ND	ND	ND	ND	12	27	0.007	0.056
BLOOMINGTON, IN	108,978	ND	ND	ND	ND	ND	ND	ND	ND
BLOOMINGTON-NORMAL, IL	129,180	ND	ND	ND	ND	ND	ND	ND	ND
BOISE CITY, ID	295,851	5	ND	IN	ND	36	90	ND	ND
BOSTON, MA-NH	3,227,707	5	ND	0.031	0.11	27	80	0.008	0.037
BOULDER-LONGMONT, CO	225,339	6	ND	ND	0.09	19	59	ND	ND
BRAZORIA, TX	191,707	ND	ND	ND	0.11	ND	ND	ND	ND
BREMERTON, WA	189,731	4	ND	ND	ND	14	41	ND	ND
BRIDGEPORT, CT	443,722	3	0.02	0.024	<b>0.13</b>	27	63	0.006	0.023
BROCKTON, MA	236,409	ND	ND	0.008	0.10	ND	ND	ND	ND
BROWNSVILLE-HARLINGEN-SAN BENITO, TX	260,120	2	0.02	ND	0.08	21	40	0.001	0.004
BRYAN-COLLEGE STATION, TX	121,862	ND	ND	ND	ND	ND	ND	ND	ND
BUFFALO-NIAGARA FALLS, NY	1,189,288	4	0.03	0.022	0.10	22	78	0.008	0.048
BURLINGTON, VT	151,506	3	ND	0.017	ND	20	37	0.002	0.014
CAGUAS, PR	279,501	ND	ND	ND	ND	ND	ND	ND	ND
CANTON-MASSILLON, OH	394,106	3	ND	ND	0.10	28	68	0.006	0.032
CASPER, WY	61226	ND	ND	ND	ND	19	36	ND	ND

**Table A-14.** Maximum Air Quality Concentrations by Metropolitan Statistical Area, 1996 (continued)

Metropolitan Statistical Area	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> WTD AM (µgm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> AM (ppm)	SO <sub>2</sub> 24-hr (ppm)
CEDAR RAPIDS, IA	168,767	8	ND	ND	0.07	26	65	0.011	<b>0.200(*)</b>
CHAMPAIGN-URBANA, IL	173,025	ND	ND	ND	0.09	19	39	0.003	0.013
CHARLESTON-NORTH CHARLESTON, SC	506,875	5	0.02	0.010	0.10	22	54	0.003	0.021
CHARLESTON, WV	250,454	2	0.02	0.020	0.10	25	50	0.010	0.039
CHARLOTTE-GASTONIA-ROCK HILL, NC-SC	1,162,093	5	0.01	0.016	<b>0.13</b>	28	53	0.005	0.015
CHARLOTTESVILLE, VA	131,107	ND	ND	ND	ND	21	39	ND	ND
CHATTANOOGA, TN-GA	424,347	ND	ND	ND	0.11	33	65	ND	ND
CHEYENNE, WY	73,142	ND	ND	ND	ND	15	31	ND	ND
CHICAGO, IL	7,410,858	5	0.54(a)	0.032	<b>0.13</b>	40	122	0.008	0.032
CHICO-PARADISE, CA	182,120	5	0.00	0.013	0.10	25	62	ND	ND
CINCINNATI-OH-KY-IN	1,526,092	3	0.22	0.029	0.12	32	72	0.011	0.045
CLARKSVILLE-HOPKINSVILLE, TN-KY	169,439	ND	ND	ND	0.10	26	56	0.006	0.023
CLEVELAND-LORAIN-ELYRIA, OH	2,202,069	9	1.06(b)	0.026	0.12	41	123	0.011	0.049
COLORADO SPRINGS, CO	397,014	5	0.01	ND	0.08	26	76	ND	ND
COLUMBIA, MO	112,379	ND	ND	ND	ND	ND	ND	ND	ND
COLUMBIA, SC	453,331	3	0.02	0.013	0.10	42	117	0.004	0.020
COLUMBUS, GA-AL	260,860	ND	0.65(c)	ND	0.10	22	58	ND	ND
COLUMBUS, OH	1,345,450	3	0.07	ND	0.11	28	66	0.004	0.021
CORPUS CHRISTI, TX	349,894	ND	ND	ND	0.10	25	45	0.003	0.015
CUMBERLAND, MD-WV	101,643	ND	ND	ND	ND	27	47	0.003	0.019
DALLAS, TX	2,676,248	6	0.70(d)	0.019	<b>0.14</b>	<b>51</b>	102	0.005	0.046
DANBURY, CT	193,597	ND	ND	ND	0.11	IN	45	0.005	0.020
DANVILLE, VA	108,711	ND	ND	ND	ND	ND	ND	ND	ND
DAVENPORT-MOLINE-ROCK ISLAND, IA-IL	350,861	ND	0.02	ND	0.09	43	153	0.004	0.024
DAYTON-SPRINGFIELD, OH	951,270	3	0.05	ND	0.12	25	66	0.005	0.031
DAYTONA BEACH, FL	399,413	ND	ND	ND	0.09	21	63	ND	ND
DECATUR, AL	131,556	ND	ND	ND	0.11	21	45	IN	0.001
DECATUR, IL	117,206	ND	0.02	ND	0.10	28	53	0.005	0.022
DENVER, CO	1,622,980	7	0.05	0.033	0.11	34	96	0.006	0.024
DES MOINES, IA	392,928	4	ND	ND	0.08	IN	130	ND	ND
DETROIT, MI	4,266,654	6	0.04	0.021	0.11	40	106	0.011	0.079
DOOTHAN, AL	130,964	ND	ND	ND	ND	IN	54	ND	ND
DOVER, DE	110,993	ND	ND	ND	0.11	ND	ND	ND	ND
DUBUQUE, IA	86,403	ND	ND	ND	ND	ND	ND	0.003	0.022
DULUTH-SUPERIOR, MN-WI	239,971	5	ND	ND	0.07	21	58	ND	ND
DUTCHESS COUNTY, NY	259,462	ND	ND	ND	0.11	ND	ND	ND	ND
EAU CLAIRE, WI	137,543	ND	ND	ND	ND	ND	ND	ND	ND
EL PASO, TX	591,610	<b>10</b>	0.40	0.035	0.12	45	<b>158</b>	0.009	0.046
ELKHART-GOSHEN, IN	156,198	ND	ND	ND	0.12	ND	ND	ND	ND
ELMIRA, NY	95,195	ND	ND	ND	0.09	IN	24	0.004	0.016
ENID, OK	56,735	ND	ND	0.009	ND	ND	ND	ND	ND
ERIE, PA	275,572	ND	ND	0.015	0.10	IN	56	0.011	0.066
EUGENE-SPRINGFIELD, OR	282,912	6	0.02	ND	0.11	19	78	ND	ND
EVANSVILLE-HENDERSON, IN-KY	278,990	4	ND	0.017	0.12	26	59	0.018	0.097
FARGO-MOORHEAD, ND-MN	153,296	ND	ND	0.008	0.08	17	54	0.002	0.008
FAYETTEVILLE, NC	274,566	4	ND	ND	0.11	26	53	0.004	0.012
FAYETTEVILLE-SPRINGDALE-ROGERS, AR	259,462	ND	ND	ND	ND	23	48	ND	ND
FITCHBURG-LEOMINSTER, MA	138,165	ND	ND	ND	ND	ND	ND	ND	ND
FLAGSTAFF, AZ-UT	101,760	ND	ND	ND	0.08	IN	31	ND	ND
FLINT, MI	430,459	ND	0.01	ND	0.11	20	45	0.002	0.012
FLORENCE, AL	131,327	ND	ND	ND	ND	18	46	0.003	0.019
FLORENCE, SC	114,344	ND	0.01	ND	ND	ND	ND	ND	ND

**Table A-14.** Maximum Air Quality Concentrations by Metropolitan Statistical Area, 1996 (continued)

Metropolitan Statistical Area	1990 Population	CO 8-hr (ppm)	Pb OMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> WTD AM (µgm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> AM (ppm)	SO <sub>2</sub> 24-hr (ppm)
FORT COLLINS-LOVELAND, CO	186,136	5	ND	ND	0.09	IN	52	ND	ND
FORT LAUDERDALE, FL	1,255,488	4	0.05	0.010	0.10	20	48	0.002	0.008
FORT MYERS-CAPE CORAL, FL	335,113	ND	ND	ND	0.08	17	38	ND	ND
FORT PIERCE-PORT ST. LUCIE, FL	251,071	ND	ND	ND	0.07	IN	42	ND	ND
FORT SMITH, AR-OK	175,911	ND	ND	ND	ND	25	47	ND	ND
FORT WALTON BEACH, FL	143,776	ND	ND	ND	ND	ND	ND	ND	ND
FORT WAYNE, IN	456,281	3	0.02	0.007	0.11	35	80	0.003	0.010
FORT WORTH-ARLINGTON, TX	1,361,034	3	0.02	0.021	<b>0.13</b>	24	56	0.001	0.011
FRESNO, CA	755,580	7	0.00	0.021	<b>0.15</b>	39	101	0.002	0.008
GADSDEN, AL	99,840	ND	0.26	ND	ND	23	50	ND	ND
GAINESVILLE, FL	181,596	ND	ND	ND	ND	19	44	ND	ND
GALVESTON-TEXAS CITY, TX	217,399	ND	0.02	IN	0.11	22	52	0.014	0.067
GARY, IN	604,526	4	0.21(e)	0.021	<b>0.13</b>	28	<b>208</b>	0.007	0.031
GLENS FALLS, NY	118,539	ND	ND	ND	ND	IN	40	0.002	0.013
GOLDSBORO, NC	104,666	ND	ND	ND	ND	23	43	ND	ND
GRAND FORKS, ND-MN	103,181	ND	ND	ND	ND	IN	53	ND	ND
GRAND JUNCTION, CO	93,145	6	ND	ND	ND	ND	21	63	ND
GRAND RAPIDS-MUSKEGON-HOLLAND, MI	937,891	3	0.01	0.009	<b>0.13</b>	22	71	0.002	0.011
GREAT FALLS, MT	77,691	5	ND	ND	ND	19	59	0.004	0.020
GREELEY, CO	131,821	7	ND	ND	0.10	18	56	ND	ND
GREEN BAY, WI	194,594	ND	ND	ND	0.11	ND	ND	0.003	0.011
GREENSBORO—WINSTON-SALEM—HIGH POINT, NC	1,050,304	4	ND	0.016	0.12	28	58	0.007	0.026
GREENVILLE, NC	107,924	ND	ND	ND	0.10	20	36	ND	ND
GREENVILLE-SPARTANBURG-ANDERSON, SC	830,563	5	0.01	0.016	0.11	39	77	0.002	0.012
HAGERSTOWN, MD	121,393	ND	ND	ND	ND	ND	ND	ND	ND
HAMILTON-MIDDLETOWN, OH	291,479	ND	0.05	ND	0.12	32	78	0.007	0.026
HARRISBURG-LEBANON-CARLISLE, PA	587,986	2	0.04	0.021	0.10	23	63	0.006	0.022
HARTFORD, CT	1,157,585	5	0.03	0.016	0.10	21	49	0.006	0.022
HATTIESBURG, MS	98,738	ND	ND	ND	ND	ND	ND	ND	ND
HICKORY-MORGANTON-LENOIR, NC	292,409	ND	ND	ND	0.09	24	60	0.004	0.012
HONOLULU, HI	836,231	3	0.03	0.003	0.05	19	29	0.002	0.009
HOUMA, LA	182,842	ND	ND	ND	0.09	ND	ND	ND	ND
HOUSTON, TX	3,322,025	7	0.02	0.023	<b>0.18</b>	40	68	0.006	0.046
HUNTINGTON-ASHLAND, WV-KY-OH	312,529	4	0.05	0.013	0.12	37	86	0.012	0.057
HUNTSVILLE, AL	293,047	3	ND	ND	0.10	22	54	ND	ND
INDIANAPOLIS, IN	1,380,491	3	0.16(f)	0.018	0.12	29	71	0.006	0.041
IOWA CITY, IA	96,119	ND	ND	ND	ND	ND	ND	ND	ND
JACKSON, MI	149,756	ND	ND	ND	ND	ND	ND	ND	ND
JACKSON, MS	395,396	5	ND	ND	0.10	22	55	0.002	0.008
JACKSON, TN	90,801	ND	0.02	ND	ND	22	45	ND	ND
JACKSONVILLE, FL	906,727	4	0.02	0.015	0.10	26	61	0.006	0.030
JACKSONVILLE, NC	149,838	ND	ND	ND	ND	22	37	ND	ND
JAMESTOWN, NY	141,895	ND	ND	ND	0.10	15	33	0.008	0.039
JANESVILLE-BELOIT, WI	139,510	ND	ND	ND	0.10	ND	ND	ND	ND
JERSEY CITY, NJ	553,099	7	0.03	0.027	0.12	43	83	0.009	0.030
JOHNSON CITY-KINGSPORT-BRISTOL, TN-VA	436,047	3	0.13	0.018	0.10	28	67	0.012	0.052
JOHNSTOWN, PA	241,247	5	0.05	0.018	0.10	IN	63	0.011	0.034
JONESBORO, AR	68,956	ND	ND	ND	ND	26	53	ND	ND
JOPLIN, MO	134,910	ND	ND	ND	ND	ND	ND	ND	ND
KALAMAZOO-BATTLE CREEK, MI	429,453	2	0.01	0.011	0.10	22	57	0.003	0.011
KANKAKEE, IL	96,255	ND	ND	ND	ND	ND	ND	ND	ND
KANSAS CITY, MO-KS	1,582,875	4	0.07	0.022	0.11	45	120	0.006	0.057

**Table A-14.** Maximum Air Quality Concentrations by Metropolitan Statistical Area, 1996 (continued)

Metropolitan Statistical Area	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> WTD AM (µgm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> AM (ppm)	SO <sub>2</sub> 24-hr (ppm)
KENOSHA, WI	128,181	ND	ND	ND	<b>0.14</b>	ND	ND	ND	ND
KILLEEN-TEMPLE, TX	255,301	ND	ND	ND	ND	IN	41	ND	ND
KNOXVILLE, TN	585,960	3	ND	0.014	0.11	36	78	0.009	0.058
KOKOMO, IN	96,946	ND	ND	ND	ND	ND	ND	ND	ND
LA CROSSE, WI-MN	116,401	ND	ND	ND	ND	ND	ND	ND	ND
LAFAYETTE, LA	344,853	ND	ND	ND	0.10	16	25	ND	ND
LAFAYETTE, IN	161,572	1	ND	IN	ND	IN	34	IN	0.020
LAKE CHARLES, LA	168,134	ND	ND	0.006	0.10	IN	33	0.003	0.018
LAKELAND-WINTER HAVEN, FL	405,382	ND	ND	ND	0.09	22	45	0.006	0.021
LANCASTER, PA	422,822	3	0.04	0.017	0.10	31	69	0.005	0.021
LANSING-EAST LANSING, MI	432,674	ND	ND	ND	0.10	ND	ND	ND	ND
LAREDO, TX	133,239	6	ND	ND	0.07	42	103	ND	ND
LAS CRUCES, NM	135,510	4	0.07	0.009	0.12	<b>56</b>	143	0.006	0.056
LAS VEGAS, NV-AZ	852,737	<b>10</b>	ND	0.027	0.10	IN	<b>328</b>	ND	ND
LAWRENCE, KS	81,798	ND	ND	ND	ND	ND	ND	ND	ND
LAWRENCE, MA-NH	353,232	ND	ND	ND	0.09	IN	34	0.005	0.023
LAWTON, OK	111,486	2	ND	IN	0.08	IN	56	ND	ND
LEWISTON-AUBURN, ME	93,679	ND	ND	ND	ND	20	37	0.004	0.018
LEXINGTON, KY	405,936	3	0.04	0.014	0.10	26	60	0.006	0.020
LIMA, OH	154,340	ND	ND	ND	0.11	IN	44	0.003	0.015
LINCOLN, NE	213,641	5	ND	ND	0.06	28	63	ND	ND
LITTLE ROCK-NORTH LITTLE ROCK, AR	513,117	4	ND	0.011	0.10	29	52	0.002	0.009
LONGVIEW-MARSHALL, TX	193,801	ND	ND	ND	0.11	ND	ND	ND	ND
LOS ANGELES-LONG BEACH, CA	8,863,164	<b>15</b>	0.06	0.045	<b>0.20</b>	45	109	0.004	0.011
LOUISVILLE, KY-IN	948,829	6	0.02	0.020	0.12	28	61	0.009	0.038
LOWELL, MA-NH	280,578	5	ND	ND	ND	ND	ND	ND	ND
LUBBOCK, TX	222,636	ND	ND	ND	ND	22	85	ND	ND
LYNCHBURG, VA	193,928	ND	ND	ND	ND	23	41	ND	ND
MACON, GA	290,909	ND	ND	ND	ND	IN	34	ND	ND
MADISON, WI	367,085	4	ND	ND	0.09	21	44	0.002	0.010
MANCHESTER, NH	50,000	ND	ND	ND	ND	ND	ND	ND	ND
MANSFIELD, OH	174,007	ND	ND	ND	ND	24	68	ND	ND
MAYAGUEZ, PR	237,143	ND	ND	ND	ND	ND	ND	ND	ND
MCALLEN-EDINBURG-MISSION, TX	383,545	ND	ND	ND	0.06	28	111	ND	ND
MEDFORD-ASHLAND, OR	146,389	7	0.02	ND	0.10	29	82	ND	ND
MELBOURNE-TITUSVILLE-PALM BAY, FL	398,978	ND	ND	ND	0.09	18	44	ND	ND
MEMPHIS, TN-AR-MS	1,007,306	7	<b>2.81(g)</b>	0.024	<b>0.15</b>	29	60	0.004	0.017
MERCED, CA	178,403	ND	ND	0.012	0.12	IN	57	ND	ND
MIAMI, FL	1,937,094	5	0.01	0.016	0.10	28	62	0.002	0.005
MIDDLESEX-SOMERSET-HUNTERDON, NJ	1,019,835	3	0.06	0.020	<b>0.13</b>	IN	46	0.005	0.024
MILWAUKEE-WAUKESHA, WI	1,432,149	3	0.03	0.021	0.12	28	69	0.004	0.028
MINNEAPOLIS-ST. PAUL, MN-WI	2,538,834	7	0.55(h)	0.027	0.09	30	91	0.004	0.041
MOBILE, AL	476,923	ND	ND	ND	0.10	28	91	0.009	0.070
MODESTO, CA	370,522	6	0.00	0.022	<b>0.13</b>	32	83	ND	ND
MONMOUTH-OCEAN, NJ	986,327	5	ND	ND	0.12	ND	ND	ND	ND
MONROE, LA	142,191	ND	ND	ND	0.09	IN	76	0.003	0.007
MONTGOMERY, AL	292,517	2	ND	0.010	0.10	23	39	0.003	0.022
MUNCIE, IN	119,659	ND	0.94(i)	ND	ND	ND	ND	ND	ND
MYRTLE BEACH, SC	144,053	ND	ND	ND	ND	ND	ND	ND	ND
NAPLES, FL	152,099	ND	ND	ND	ND	16	45	ND	ND
NASHUA, NH	168,233	8	ND	0.019	0.10	17	44	0.007	0.026
NASHVILLE, TN	985,026	5	0.90(j)	0.012	0.12	32	66	0.007	0.076

**Table A-14.** Maximum Air Quality Concentrations by Metropolitan Statistical Area, 1996 (continued)

Metropolitan Statistical Area	1990 Population	CO 8-hr (ppm)	Pb OMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> WTD AM (µgm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> AM (ppm)	SO <sub>2</sub> 24-hr (ppm)
NASSAU-SUFFOLK, NY	2,609,212	5	ND	0.026	0.12	21	55	0.008	0.031
NEW BEDFORD, MA	175,641	ND	ND	ND	0.12	16	44	ND	ND
NEW HAVEN-MERIDEN, CT	530,180	3	0.05	0.026	0.12	28	109	0.008	0.031
NEW LONDON-NORWICH, CT-RI	290,734	ND	ND	ND	0.12	19	56	0.005	0.016
NEW ORLEANS, LA	1,285,270	4	0.09	0.018	0.11	31	64	0.006	0.035
NEW YORK, NY	8,546,846	6	0.16	0.042	0.12	41	87	0.015	0.055
NEWARK, NJ	1,915,928	6	0.07	0.041	0.12	34	67	0.007	0.030
NEWBURGH, NY-PA	335,613	ND	0.06	ND	0.12	ND	ND	ND	ND
NORFOLK-VIRGINIA BEACH-NEWPORT, VA	1,443,244	6	0.03	0.018	0.10	21	50	0.007	0.025
OAKLAND, CA	2,082,914	4	0.02	0.022	<b>0.14</b>	23	45	0.003	0.011
OCALA, FL	194,833	ND	ND	ND	ND	ND	ND	ND	ND
ODESSA-MIDLAND, TX	255,545	ND	ND	ND	ND	26	59	ND	ND
OKLAHOMA CITY, OK	958,839	8	0.01	0.014	0.10	28	56	IN	0.005
OLYMPIA, WA	161,238	4	ND	ND	ND	IN	53	ND	ND
OMAHA, NE-IA	639,580	7	<b>5.06(k)</b>	ND	0.07	42	145	0.004	0.051
ORANGE COUNTY, CA	2,410,556	7	ND	0.035	<b>0.14</b>	35	77	0.001	0.004
ORLANDO, FL	1,224,852	4	0.00	0.013	0.10	25	67	0.002	0.008
OWENSBORO, KY	87,189	3	ND	0.011	0.11	23	59	0.007	0.020
PANAMA CITY, FL	126,994	ND	ND	ND	ND	22	50	ND	ND
PARKERSBURG-MARIETTA, WV-OH	149,169	ND	0.02	ND	0.11	23	78	0.010	0.046
PENSACOLA, FL	344,406	ND	ND	ND	0.10	21	37	0.005	0.033
PEORIA-PEKIN, IL	339,172	5	0.02	ND	0.09	24	44	0.008	0.047
PHILADELPHIA, PA-NJ	4,922,175	6	<b>9.23(l)</b>	0.034	<b>0.13</b>	<b>70</b>	<b>356</b>	0.010	0.063
PHOENIX-MESA, AZ	2,238,480	<b>10</b>	0.05	0.032	0.12	IN	130	0.003	0.020
PINE BLUFF, AR	85,487	ND	ND	ND	ND	23	51	ND	ND
PITTSBURGH, PA	2,384,811	4	0.07	0.030	0.11	41	123	0.015	0.070
PITTSFIELD, MA	88,695	ND	ND	ND	0.11	ND	ND	ND	ND
POCATELLO, ID	66,026	ND	ND	0.014	ND	31	89	0.006	0.030
PONCE, PR	3,442,660	ND	ND	ND	ND	IN	53	ND	ND
PORTLAND, ME	221,095	ND	ND	ND	0.10	27	61	0.005	0.021
PORTLAND-VANCOUVER, OR-WA	1,515,452	7	0.11	IN	<b>0.13</b>	27	70	ND	ND
PORTSMOUTH-ROCHESTER, NH-ME	223,271	ND	ND	0.013	0.11	18	42	0.004	0.015
PROVIDENCE-FALL RIVER-WARWICK, RI-MA	1,134,350	4	ND	0.025	0.11	38	83	0.009	0.043
PROVO-OREM, UT	263,590	9	ND	0.024	0.11	37	141	ND	ND
PUEBLO, CO	123,051	ND	ND	ND	ND	IN	49	ND	ND
PUNTA GORDA, FL	110,975	ND	ND	ND	ND	ND	ND	ND	ND
RACINE, WI	175,034	3	ND	ND	<b>0.13</b>	ND	ND	ND	ND
RALEIGH-DURHAM-CHAPEL HILL, NC	855,545	6	ND	ND	0.11	26	49	0.003	0.010
RAPID CITY, SD	81,343	ND	ND	ND	ND	37	137	ND	ND
READING, PA	336,523	3	0.82(m)	0.022	0.11	30	66	0.010	0.037
REDDING, CA	147,036	ND	ND	ND	0.11	IN	50	ND	ND
RENO, NV	254,667	8	ND	ND	0.10	45	131	ND	ND
RICHLAND-KENNEWICK-PASCO, WA	150,033	ND	ND	ND	ND	IN	82	ND	ND
RICHMOND-PETERSBURG, VA	865,640	3	0.01	0.022	0.11	26	69	0.006	0.027
RIVERSIDE-SAN BERNARDINO, CA	2,588,793	7	0.04	0.038	<b>0.22</b>	<b>63</b>	<b>155</b>	0.002	0.005
ROANOKE, VA	224,477	6	ND	0.013	0.08	IN	78	0.003	0.014
ROCHESTER, MN	106,470	ND	ND	ND	ND	19	44	0.002	0.016
ROCHESTER, NY	1,062,470	4	0.04	ND	0.09	25	54	0.010	0.041
ROCKFORD, IL	329,676	3	0.05	ND	0.09	18	36	ND	ND
ROCKY MOUNT, NC	133,235	ND	ND	ND	0.09	23	39	0.003	0.010
SACRAMENTO, CA	1,340,010	7	0.01	0.022	<b>0.14</b>	27	80	0.002	0.005
SAGINAW-BAY CITY-MIDLAND, MI	399,320	ND	ND	ND	ND	ND	ND	ND	ND

**Table A-14.** Maximum Air Quality Concentrations by Metropolitan Statistical Area, 1996 (continued)

Metropolitan Statistical Area	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> WTD AM (µgm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> AM (ppm)	SO <sub>2</sub> 24-hr (ppm)
ST. CLOUD, MN	190,921	4	ND	ND	ND	ND	ND	ND	ND
ST. JOSEPH, MO	83,083	ND	ND	ND	ND	32	126	0.008	0.079
ST. LOUIS, MO-IL	1,836,302	6	<b>5.74(n)</b>	0.025	<b>0.13</b>	40	107	0.012	0.102
SALEM, OR	278,024	7	ND	ND	0.12	ND	ND	ND	ND
SALINAS, CA	355,660	2	ND	0.011	0.09	20	40	ND	ND
SALT LAKE CITY-OGDEN, UT	1,072,227	7	0.03	0.026	0.12	47	<b>157</b>	0.004	0.021
SAN ANGELO, TX	98,458	ND	ND	ND	ND	ND	ND	ND	ND
SAN ANTONIO, TX	1,324,749	5	0.02	0.009	<b>0.13</b>	20	38	ND	ND
SAN DIEGO, CA	2,498,016	6	0.02	0.022	<b>0.13</b>	30	92	0.005	0.017
SAN FRANCISCO, CA	1,603,678	5	0.01	0.022	0.10	24	59	0.002	0.007
SAN JOSE, CA	1,497,577	6	0.01	0.025	0.12	25	68	ND	ND
SAN JUAN-BAYAMON, PR	1,836,302	7	ND	ND	ND	34	95	0.006	0.022
SAN LUIS OBISPO-ATASCADERO-PASO ROBLE, CA	217,162	2	ND	0.013	0.11	21	96	0.006	0.029
SANTA BARBARA-SANTA MARIA-LOMPOC, CA	369,608	5	0.00	0.019	<b>0.13</b>	29	63	0.001	0.006
SANTA CRUZ-WATSONVILLE, CA	229,734	1	ND	0.005	0.10	33	69	0.002	0.003
SANTA FE, NM	117,043	2	ND	ND	ND	14	33	ND	ND
SANTA ROSA, CA	388,222	3	ND	0.014	0.09	17	39	ND	ND
SARASOTA-BRADENTON, FL	489,483	5	ND	ND	0.09	27	73	0.002	0.018
SAVANNAH, GA	258,060	ND	ND	ND	0.09	ND	ND	0.005	0.030
SCRANTON—WILKES-BARRE—HAZLETON, PA	638,466	4	ND	0.018	0.11	24	61	0.007	0.033
SEATTLE-BELLEVUE-EVERETT, WA	2,033,156	7	0.66(o)	0.020	0.12	24	93	0.006	0.019
SHARON, PA	121,003	ND	0.07	ND	0.10	IN	52	0.007	0.029
SHEBOYGAN, WI	103,877	ND	ND	ND	0.11	ND	ND	ND	ND
SHERMAN-DENISON, TX	95,021	ND	ND	ND	ND	ND	ND	ND	ND
SHREVEPORT-BOSSIER CITY, LA	376,330	ND	ND	ND	0.10	22	47	0.002	0.004
SIOUX CITY, IA-NE	115,018	ND	ND	ND	ND	IN	95	ND	ND
SIOUX FALLS, SD	139,236	ND	ND	ND	ND	19	53	ND	ND
SOUTH BEND, IN	247,052	3	ND	0.011	0.11	20	45	ND	ND
SPOKANE, WA	361,364	9	ND	ND	0.08	32	110	ND	ND
SPRINGFIELD, IL	189,550	3	ND	ND	0.10	IN	26	0.006	0.061
SPRINGFIELD, MO	264,346	3	ND	0.011	0.10	41	148	0.008	0.089
SPRINGFIELD, MA	587,884	8	ND	0.024	0.11	30	67	0.007	0.028
STAMFORD-NORWALK, CT	329,935	4	ND	ND	0.12	32	65	0.005	0.026
STATE COLLEGE, PA	123,786	ND	ND	ND	0.09	ND	ND	ND	ND
STEUBENVILLE-WEIRTON, OH-WV	142,523	6	0.04	0.020	0.10	37	<b>170</b>	0.014	0.066
STOCKTON-LODI, CA	480,628	7	0.00	0.023	<b>0.13</b>	27	61	ND	ND
SUMTER, SC	102,637	ND	0.01	ND	ND	ND	ND	ND	ND
SYRACUSE, NY	742,177	4	ND	ND	0.09	24	61	0.003	0.015
TACOMA, WA	586,203	6	ND	ND	0.10	22	74	0.006	0.028
TALLAHASSEE, FL	233,598	ND	ND	ND	0.09	IN	33	ND	ND
TAMPA-ST. PETERSBURG-CLEARWATER, FL	2,067,959	4	<b>2.81(p)</b>	0.011	0.11	35	81	0.007	0.087
TERRE HAUTE, IN	147,585	3	ND	ND	0.11	27	53	0.012	0.039
TEXARKANA, TX-TEXARKANA, AR	120,132	ND	ND	ND	ND	23	50	ND	ND
TOLEDO, OH	614,128	3	0.44(q)	ND	0.11	23	69	0.005	0.049
TOPEKA, KS	160,976	ND	0.01	ND	ND	21	58	ND	ND
TRENTON, NJ	325,824	ND	ND	0.017	0.12	27	59	ND	ND
TUSCON, AZ	666,880	5	0.05	0.019	0.09	38	81	0.001	0.004
TULSA, OK	708,954	7	0.11	0.015	0.12	IN	76	0.008	0.042
TUSCALOOSA, AL	150,522	ND	ND	ND	ND	IN	58	ND	ND
TYLER, TX	151,309	ND	ND	ND	0.10	IN	30	ND	ND
UTICA-ROME, NY	316,633	ND	ND	ND	0.08	20	43	0.002	0.009
VALLEJO-FAIRFIELD-NAPA, CA	451,186	5	ND	0.015	0.12	20	43	0.002	0.006
VENTURA, CA	669,016	3	0.00	0.022	<b>0.14</b>	30	79	0.001	0.003

**Table A-14.** Maximum Air Quality Concentrations by Metropolitan Statistical Area, 1996 (continued)

Metropolitan Statistical Area	1990 Population	CO 8-hr (ppm)	Pb QMAX (µgm)	NO <sub>2</sub> AM (ppm)	O <sub>3</sub> 2nd MAX (ppm)	PM <sub>10</sub> WTD AM (µgm)	PM <sub>10</sub> 2nd MAX (µgm)	SO <sub>2</sub> AM (ppm)	SO <sub>2</sub> 24-hr (ppm)
VICTORIA, TX	74,361	ND	ND	ND	0.09	ND	ND	ND	ND
VINELAND-MILLVILLE-BRIDGETON, NJ	138,053	ND	ND	ND	0.11	ND	ND	0.005	0.016
VISALIA-TULARE-PORTERVILLE, CA	311,921	4	ND	0.018	<b>0.14</b>	45	87	ND	ND
WACO, TX	189,123	ND	ND	ND	ND	ND	ND	ND	ND
WASHINGTON, DC-MD-VA-WV	4,223,485	5	0.02	0.026	0.12	23	57	0.009	0.048
WATERBURY, CT	221,629	ND	0.04	ND	ND	27	69	0.005	0.022
WATERLOO-CEDAR FALLS, IA	123,798	ND	ND	ND	ND	32	59	ND	ND
WAUSAU, WI	115,400	ND	ND	ND	0.08	25	50	0.003	0.015
WEST PALM BEACH-BOCA RATON, FL	863,518	4	0.00	0.012	0.09	23	56	0.002	0.014
WHEELING, WV-OH	159,301	4	ND	ND	0.11	28	86	0.015	0.072
WICHITA, KS	485,270	6	0.02	ND	0.10	26	119	0.005	0.007
WICHITA FALLS, TX	130,351	ND	ND	ND	ND	19	50	ND	ND
WILLIAMSPORT, PA	118,710	ND	ND	ND	0.08	25	46	0.006	0.028
WILMINGTON-NEWARK, DE-MD	513,293	4	ND	0.019	0.12	32	81	0.011	0.067
WILMINGTON, NC	171,269	ND	ND	ND	0.09	IN	46	0.006	0.036
WORCESTER, MA-CT	478,384	5	ND	0.019	0.09	IN	46	0.005	0.021
YAKIMA, WA	188,823	7	ND	ND	ND	31	112	ND	ND
YOLO, CA	141,092	1	ND	0.011	0.11	28	65	ND	ND
YORK, PA	339,574	3	0.07	0.021	0.10	28	53	0.007	0.022
YOUNGSTOWN-WARREN, OH	600,859	ND	0.04	0.019	0.11	33	86	0.012	0.057
YUBA CITY, CA	122,643	4	ND	0.012	0.11	29	69	ND	ND
YUMA, AZ	106,895	ND	ND	ND	0.10	IN	59	ND	ND"

CO = Highest second maximum non-overlapping 8-hour concentration (Applicable NAAQS is 9 ppm)

Pb = Highest quarterly maximum concentration (Applicable NAAQS is 1.5 µg/m<sup>3</sup>)NO<sub>2</sub> = Highest arithmetic mean concentration (Applicable NAAQS is 0.053 ppm)O<sub>3</sub> = Highest second daily maximum 1-hour concentration (Applicable NAAQS is 0.12 ppm)PM<sub>10</sub> = Highest weighted annual mean concentration (Applicable NAAQS is 50 µg/m<sup>3</sup>)

Data from exceptional events not included.

SO<sub>2</sub> = Highest second maximum 24-hour concentration (Applicable NAAQS is 150 µg/m<sup>3</sup>)SO<sub>2</sub> = Highest annual mean concentration (Applicable NAAQS is 0.03 ppm)SO<sub>2</sub> = Highest second maximum 24-hour concentration (Applicable NAAQS is 0.14 ppm)

ND = Indicates data not available

IN = Indicates insufficient data to calculate summary statistic

WTD = Weighted

AM = Annual mean

UGM = Units are micrograms per cubic meter

PPM = Units are parts per million

\* - Localized impact from electric utility and switching to low sulfur coal per SIP.

(a) - Localized impact from an industrial source in Chicago, IL. Highest population-oriented site in Chicago, IL is 0.06 µg/m<sup>3</sup>.(b) - Localized impact from an industrial source in Cleveland, OH. This facility has been shut down. Highest population-oriented site in Cleveland, OH is 0.04 µg/m<sup>3</sup>.(c) - Localized impact from an industrial source in Columbus, GA. Highest population-oriented site in Columbus, GA is 0.11 µg/m<sup>3</sup>.(d) - Localized impact from an industrial source in Collin Co., TX. Highest population-oriented site in Dallas, TX is 0.17 µg/m<sup>3</sup>.(e) - Localized impact from an industrial source in Hammond, IN. Highest population-oriented site in Hammond is 0.04 µg/m<sup>3</sup>.(f) - Localized impact from an industrial source in Indianapolis, IN. Highest population-oriented site in Indianapolis, IN is 0.07 µg/m<sup>3</sup>.(g) - Localized impact from an industrial source in Memphis, TN. Highest population-oriented site in Memphis, TN is 0.03 µg/m<sup>3</sup>.(h) - Localized impact from an industrial source in Eagan, MN. Highest population-oriented site in Minneapolis, MN is 0.01 µg/m<sup>3</sup>.

(i) - Localized impact from an industrial source in Muncie, IN.

(j) - Localized impact from an industrial source in Williamston, CO., TN. Highest population-oriented site in Nashville, TN is 0.07 µg/m<sup>3</sup>.(k) - Localized impact from an industrial source in Omaha, NE. Highest population-oriented site in Omaha, NE is 0.02 µg/m<sup>3</sup>.(l) - Localized impact from an industrial source in Philadelphia, PA. Highest population-oriented site in Philadelphia, PA is 0.76 µg/m<sup>3</sup>.

(m) - Localized impact from an industrial source in Laureldale, PA.

(n) - Localized impact from an industrial source in Herculaneum, MO. Highest population-oriented site in St. Louis, MO is 0.03 µg/m<sup>3</sup>.

(o) - Localized impact from an industrial source in Seattle.

(p) - Localized impact from an industrial source in Tampa, FL.

(q) - Localized impact from an industrial source in Toledo, OH.

**Note:** The reader is cautioned that this summary is not adequate in itself to numerically rank MSAs according to their air quality. The monitoring data represent the quality of air in the vicinity of the monitoring site but may not necessarily represent urban-wide air quality.































**Table A-15.** Metropolitan Statistical Area Air Quality Trends, 1987–1996 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
SO2	WEIGHTED ANNUAL MEAN	NS	2	—	37	35	36	33	32	35	36	34
	ARITHMETIC MEAN	DOWN	1	0.004	0.004	0.005	0.004	0.004	0.004	0.004	0.003	0.003
	SECOND MAX 24-HOUR	NS	1	0.014	0.018	0.022	0.018	0.019	0.016	0.018	0.011	0.010
<b>ROCHESTER, MN</b>	SECOND MAX 8-HOUR	DOWN	1	9.0	7.1	6.3	6.1	6.3	5.1	4.9	5.0	4.0
CO	SECOND MAX 24-HOUR	NS	1	—	54	64	89	43	44	38	43	49
PM <sub>10</sub>	WEIGHTED ANNUAL MEAN	DOWN	1	—	29	30	28	23	21	20	21	19
<b>ROCHESTER, NY</b>	SECOND MAX 8-HOUR	NS	2	3.8	4.0	3.6	3.5	3.3	3.5	3.2	4.5	3.2
CO	MAX QUARTERLY MEAN	NS	1	0.10	0.09	0.04	0.03	0.03	0.04	0.04	0.04	0.04
OZONE	SECOND DAILY MAX 1-HOUR	NS	2	0.11	0.13	0.10	0.11	0.11	0.09	0.09	0.11	0.08
PM <sub>10</sub>	SECOND MAX 24-HOUR	NS	2	—	81	60	47	61	49	64	42	45
WEIGHTED ANNUAL MEAN	DOWN	2	—	30	24	21	26	22	23	20	21	21
SO2	ARITHMETIC MEAN	DOWN	2	0.011	0.012	0.013	0.012	0.011	0.011	0.010	0.011	0.010
SECOND MAX 24-HOUR	NS	2	0.045	0.038	0.054	0.040	0.043	0.039	0.041	0.043	0.038	0.033
<b>ROCKFORD, IL</b>	SECOND MAX 8-HOUR	DOWN	1	8.0	8.1	6.6	6.5	5.1	4.6	4.3	4.0	4.5
CO	MAX QUARTERLY MEAN	DOWN	1	0.05	0.13	0.07	0.09	0.04	0.06	0.03	0.04	0.03
LEAD	SECOND DAILY MAX 1-HOUR	NS	2	0.09	0.11	0.09	0.09	0.09	0.09	0.08	0.10	0.10
PM <sub>10</sub>	SECOND MAX 24-HOUR	NS	1	—	37	58	54	55	49	42	44	45
WEIGHTED ANNUAL MEAN	NS	1	—	17	25	25	22	21	16	19	19	18
<b>SACRAMENTO, CA</b>	SECOND MAX 8-HOUR	DOWN	5	9.5	10.4	9.8	9.6	8.4	6.7	7.2	6.9	5.4
CO	MAX QUARTERLY MEAN	DOWN	2	0.11	0.08	0.07	0.10	0.04	0.02	0.05	0.02	0.02
NO <sub>2</sub>	ARITHMETIC MEAN	DOWN	4	0.019	0.019	0.019	0.019	0.017	0.017	0.018	0.015	0.016
OZONE	SECOND DAILY MAX 1-HOUR	NS	6	0.13	0.14	0.11	0.13	0.14	0.12	0.12	0.11	0.13
SO2	ARITHMETIC MEAN	DOWN	1	0.010	0.010	0.006	0.006	0.003	0.002	0.001	0.001	0.001
SECOND MAX 24-HOUR	DOWN	1	0.020	0.020	0.020	0.010	0.010	0.010	0.003	0.004	0.004	0.003
<b>SAGINAW-BAY CITY-MIDLAND, MI</b>	SECOND MAX 24-HOUR	DOWN	1	—	100	124	71	86	115	51	45	45
PM <sub>10</sub>	WEIGHTED ANNUAL MEAN	DOWN	1	—	31	30	26	30	29	22	22	22
<b>SALINAS, CA</b>	SECOND MAX 8-HOUR	NS	1	2.3	2.3	2.3	2.5	2.1	2.3	2.1	2.0	1.7
CO	ARITHMETIC MEAN	DOWN	1	0.013	0.014	0.014	0.012	0.012	0.012	0.012	0.011	0.011
OZONE	SECOND DAILY MAX 1-HOUR	NS	2	0.08	0.08	0.10	0.08	0.08	0.07	0.08	0.07	0.08
PM <sub>10</sub>	SECOND MAX 24-HOUR	NS	1	—	49	49	49	43	38	55	33	47
WEIGHTED ANNUAL MEAN	DOWN	1	—	25	25	23	23	22	22	20	21	20
<b>SALT LAKE CITY-OGDEN, UT</b>	SECOND MAX 8-HOUR	DOWN	2	8.7	7.7	7.3	6.9	7.8	7.6	6.5	6.4	5.7
CO	MAX QUARTERLY MEAN	DOWN	3	0.16	0.16	0.13	0.08	0.08	0.05	0.06	0.05	0.05
LEAD	ARITHMETIC MEAN	NS	1	0.024	0.026	0.027	0.019	0.020	0.022	0.025	0.026	0.026
NO <sub>2</sub>	SECOND DAILY MAX 1-HOUR	NS	4	0.11	0.12	0.13	0.11	0.10	0.09	0.10	0.11	0.11
PM <sub>10</sub>	SECOND MAX 24-HOUR	DOWN	8	—	136	129	96	151	133	114	94	81
WEIGHTED ANNUAL MEAN	DOWN	8	—	42	43	32	39	35	35	30	28	31
SO2	ARITHMETIC MEAN	DOWN	4	0.008	0.010	0.010	0.008	0.009	0.008	0.007	0.004	0.003
SECOND MAX 24-HOUR	NS	4	0.039	0.051	0.079	0.036	0.048	0.051	0.041	0.012	0.012	0.012
<b>SAN ANTONIO, TX</b>	SECOND MAX 8-HOUR	DOWN	2	6.2	5.7	6.3	5.4	4.6	4.7	5.1	3.5	4.8
CO	MAX QUARTERLY MEAN	DOWN	1	0.11	0.06	0.04	0.07	0.03	0.03	0.03	0.03	0.02
OZONE	SECOND DAILY MAX 1-HOUR	NS	2	0.12	0.12	0.11	0.10	0.11	0.10	0.11	0.11	0.12
PM <sub>10</sub>	SECOND MAX 24-HOUR	DOWN	3	—	63	57	49	48	48	54	47	41
WEIGHTED ANNUAL MEAN	DOWN	3	—	28	28	25	25	25	23	23	21	19
<b>SAN DIEGO, CA</b>	SECOND MAX 8-HOUR	DOWN	7	5.8	6.1	6.6	5.8	5.4	5.0	4.5	4.8	4.2
CO	MAX QUARTERLY MEAN	DOWN	1	0.09	0.06	0.04	0.08	0.05	0.03	0.04	0.01	0.02
LEAD	ARITHMETIC MEAN	DOWN	6	0.025	0.028	0.027	0.024	0.024	0.023	0.020	0.021	0.019
NO <sub>2</sub>	SECOND DAILY MAX 1-HOUR	DOWN	8	0.16	0.17	0.16	0.16	0.15	0.14	0.13	0.11	0.12
PM <sub>10</sub>	SECOND MAX 24-HOUR	NS	3	—	67	75	67	74	52	62	72	50
WEIGHTED ANNUAL MEAN	DOWN	3	—	36	39	34	37	32	30	31	32	28
SO2	ARITHMETIC MEAN	DOWN	2	0.004	0.005	0.005	0.004	0.003	0.004	0.003	0.003	0.004
SECOND MAX 24-HOUR	NS	2	0.012	0.014	0.016	0.015	0.018	0.019	0.010	0.014	0.012	0.014
<b>SAN FRANCISCO, CA</b>	SECOND MAX 8-HOUR	DOWN	4	6.1	6.4	5.9	5.7	6.2	4.8	4.6	4.3	3.9
CO	MAX QUARTERLY MEAN	DOWN	1	0.09	0.10	0.08	0.04	0.04	0.02	0.03	0.02	0.03
LEAD	ARITHMETIC MEAN	DOWN	1	0.024	0.026	0.026	0.021	0.024	0.022	0.024	0.021	0.022
NO <sub>2</sub>	SECOND DAILY MAX 1-HOUR	NS	3	0.09	0.09	0.08	0.06	0.06	0.08	0.07	0.09	0.08
PM <sub>10</sub>	SECOND MAX 24-HOUR	DOWN	1	—	84	84	93	84	75	72	65	45
WEIGHTED ANNUAL MEAN	DOWN	1	—	33	33	28	32	29	27	25	21	21
SO2	ARITHMETIC MEAN	NS	1	0.002	0.002	0.003	0.002	0.002	0.003	0.002	0.001	0.002
SECOND MAX 24-HOUR	NS	1	0.010	0.012	0.015	0.010	0.013	0.012	0.010	0.005	0.005	0.007
<b>SAN JOSE, CA</b>	SECOND MAX 8-HOUR	DOWN	2	7.2	10.4	11.9	10.8	10.2	7.3	6.4	7.4	5.6
LEAD	MAX QUARTERLY MEAN	DOWN	2	0.19	0.12	0.12	0.08	0.04	0.03	0.02	0.02	0.01

Note: NS = Not Significant (no significant upward or downward trend).









**Table A-15.** Metropolitan Statistical Area Air Quality Trends, 1987–1996 (continued)

Metropolitan Statistical Area		Trend	#Trend Sites	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<b>WORCESTER, MA-CT</b>													
CO	SECOND MAX 8-HOUR	NS	1	7.1	5.6	7.9	6.0	7.2	8.0	6.1	5.9	4.2	5.3
NO <sub>2</sub>	ARITHMETIC MEAN	DOWN	1	0.034	0.029	0.026	0.022	0.023	0.024	0.028	0.025	0.021	0.019
PM <sub>10</sub>	SECOND MAX 24-HOUR	DOWN	2	—	62	55	48	47	41	43	43	39	42
	WEIGHTED ANNUAL MEAN	DOWN	2	—	27	26	23	21	20	20	20	19	20
SO <sub>2</sub>	ARITHMETIC MEAN	DOWN	1	0.009	0.009	0.011	0.008	0.009	0.007	0.007	0.008	0.006	0.005
	SECOND MAX 24-HOUR	DOWN	1	0.038	0.042	0.040	0.034	0.029	0.033	0.025	0.024	0.023	0.021
<b>YAKIMA, WA</b>													
CO	SECOND MAX 8-HOUR	DOWN	1	10.9	8.9	8.7	7.4	9.0	8.8	7.9	8.0	7.1	7.4
PM <sub>10</sub>	SECOND MAX 24-HOUR	NS	1	—	77	77	77	173	67	90	86	50	99
	WEIGHTED ANNUAL MEAN	NS	1	—	34	34	34	44	32	38	31	24	35
<b>YORK, PA</b>													
CO	SECOND MAX 8-HOUR	DOWN	1	4.8	4.2	4.6	4.4	3.7	3.6	3.3	3.9	2.7	2.8
NO <sub>2</sub>	ARITHMETIC MEAN	DOWN	1	0.025	0.023	0.022	0.022	0.021	0.020	0.022	0.024	0.021	0.021
OZONE	SECOND DAILY MAX 1-HOUR	DOWN	1	0.12	0.14	0.10	0.12	0.11	0.10	0.11	0.12	0.10	0.10
PM <sub>10</sub>	SECOND MAX 24-HOUR	NS	1	—	81	57	63	69	47	77	80	66	51
	WEIGHTED ANNUAL MEAN	NS	1	—	33	31	30	32	27	31	32	30	28
SO <sub>2</sub>	ARITHMETIC MEAN	NS	1	0.008	0.007	0.008	0.007	0.008	0.007	0.008	0.009	0.006	0.007
	SECOND MAX 24-HOUR	NS	1	0.032	0.029	0.035	0.023	0.020	0.034	0.032	0.041	0.020	0.022
<b>YOUNGSTOWN-WARREN, OH</b>													
OZONE	SECOND DAILY MAX 1-HOUR	NS	1	0.11	0.12	0.11	0.10	0.12	0.10	0.10	0.10	0.11	0.10
PM <sub>10</sub>	SECOND MAX 24-HOUR	DOWN	6	—	87	86	78	82	77	74	78	82	58
	WEIGHTED ANNUAL MEAN	DOWN	6	—	37	36	31	34	31	30	31	30	28
SO <sub>2</sub>	ARITHMETIC MEAN	DOWN	2	0.012	0.014	0.016	0.016	0.016	0.013	0.011	0.011	0.010	0.009
	SECOND MAX 24-HOUR	NS	2	0.058	0.077	0.043	0.053	0.048	0.056	0.063	0.051	0.038	0.044
<b>YUBA CITY, CA</b>													
OZONE	SECOND DAILY MAX 1-HOUR	NS	1	0.11	0.13	0.09	0.11	0.10	0.11	0.13	0.09	0.11	0.10
PM <sub>10</sub>	SECOND MAX 24-HOUR	NS	1	—	88	88	88	95	75	69	81	114	69
	WEIGHTED ANNUAL MEAN	DOWN	1	—	39	39	39	39	34	30	34	33	29

- CO = Highest second maximum non-overlapping 8-hour concentration (*Applicable NAAQS is 9 ppm*)  
 Pb = Highest quarterly maximum concentration (*Applicable NAAQS is 1.5 ug/m<sup>3</sup>*)  
 NO<sub>2</sub> = Highest arithmetic mean concentration (*Applicable NAAQS is 0.053 ppm*)  
 O<sub>3</sub> = Highest second daily maximum 1-hour concentration (*Applicable NAAQS is 0.12 ppm*)  
 PM<sub>10</sub> = Highest weighted annual mean concentration (*Applicable NAAQS is 50 ug/m<sup>3</sup>*)  
     Data from exceptional events not included.  
 SO<sub>2</sub> = Highest second maximum 24-hour concentration (*Applicable NAAQS is 150 ug/m<sup>3</sup>*)  
     = Highest annual mean concentration (*Applicable NAAQS is 0.03 ppm*)  
     = Highest second maximum 24-hour concentration (*Applicable NAAQS is 0.14 ppm*)

Note: NS = Not Significant (no significant upward or downward trend).

**Table A-16.** Number of Days with PSI Values Greater Than 100 at Trend Sites, 1987–1996, and All Sites in 1996

Metropolitan Statistical Area	# of Trend Sites	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total # of Sites	PSI > 100 1996
AKRON, OH	5	5	17	4	2	2	1	0	0	1	0	7	0
ALBANY-SCHENECTADY-TROY, NY	7	0	7	0	0	1	0	0	1	0	0	12	0
ALBUQUERQUE, NM	21	26	8	10	7	5	0	1	1	2	0	26	0
ALLENTOWN-BETHLEHEM-EASTON, PA	9	5	16	0	0	3	0	0	1	0	0	11	0
ATLANTA, GA	8	27	21	3	17	6	5	17	4	19	6	16	12
AUSTIN-SAN MARCOS, TX	5	0	2	1	0	1	0	0	1	0	0	6	0
BAKERSFIELD, CA	6	67	87	76	60	65	32	56	47	49	56	20	59
BALTIMORE, MD	15	28	43	9	12	20	5	14	17	14	3	23	4
BATON ROUGE, LA	6	10	10	9	18	6	2	3	2	7	2	13	4
BERGEN-PASSAIC, NJ	8	14	19	4	4	3	0	0	0	4	0	9	0
BIRMINGHAM, AL	16	10	16	1	7	0	2	5	0	15	5	17	5
BOSTON, MA-NH	24	5	15	4	1	4	1	3	1	1	0	28	0
BUFFALO-NIAGARA FALLS, NY	21	4	18	1	2	0	0	0	0	0	0	21	0
CHARLESTON-NORTH CHARLESTON, SC	9	0	0	0	0	1	1	0	0	0	0	9	0
CHARLOTTE-GASTONIA-ROCK HILL, NC-SC	10	10	21	3	6	2	0	4	0	1	3	28	6
CHICAGO, IL	44	17	23	4	3	8	7	1	8	4	3	65	4
CINCINNATI, OH-KY-IN	21	11	21	3	6	7	0	1	4	7	1	23	2
CLEVELAND-LORAIN-ELYRIA, OH	24	6	21	4	2	3	2	2	4	4	1	40	5
COLUMBUS, OH	9	1	4	0	1	3	1	0	0	1	0	13	1
DALLAS, TX	8	10	14	7	8	1	3	5	1	13	2	24	6
DAYTON-SPRINGFIELD, OH	11	3	17	3	1	1	0	3	2	2	1	12	1
DENVER, CO	21	37	19	11	9	7	7	3	2	2	1	32	1
DETROIT, MI	28	9	17	10	3	8	1	2	8	11	3	35	3
EL PASO, TX	17	32	16	33	27	13	17	10	10	4	9	21	10
FORT LAUDERDALE, FL	7	0	3	2	0	0	0	0	0	1	0	19	0
FORT WORTH-ARLINGTON, TX	8	4	11	8	5	9	2	1	8	6	3	8	3
FRESNO, CA	8	49	29	47	29	33	27	28	11	19	31	17	39
GARY, IN	18	8	13	1	3	3	2	0	1	4	3	23	3
GRAND RAPIDS-MUSKEGON-HOLLAND, MI	6	5	10	3	2	2	0	1	1	1	3	9	4
GREENSBORO-WINSTON-SALEM-HIGH POINT, NC	10	0	19	5	2	0	0	2	1	0	2	22	2
GREENVILLE-SPARTANBURG-ANDERSON, SC	2	0	8	0	0	0	1	1	0	0	0	8	1
HARRISBURG-LEBANON-CARLISLE, PA	7	5	13	0	2	0	0	1	2	0	0	7	0
HARTFORD, CT	14	20	27	11	7	14	9	9	10	9	1	15	1
HONOLULU, HI	4	0	0	0	0	0	0	0	0	0	0	13	0
HOUSTON, TX	28	67	61	41	59	42	30	26	29	54	28	33	32
INDIANAPOLIS, IN	27	3	9	2	1	1	1	0	2	2	2	33	5
JACKSONVILLE, FL	14	2	2	0	0	0	0	1	0	2	0	19	0
JERSEY CITY, NJ	8	12	18	2	7	8	1	5	1	2	2	10	2
KANSAS CITY, MO-KS	24	6	4	2	2	2	1	2	0	6	3	28	3
KNOXVILLE, TN	13	0	8	0	5	0	0	2	1	4	1	24	1
LAS VEGAS, NV-AZ	7	7	31	46	22	12	5	8	12	7	3	19	13
LITTLE ROCK-NORTH LITTLE ROCK, AR	7	1	0	0	1	0	0	0	0	1	0	8	0
LOS ANGELES-LONG BEACH, CA	36	201	239	226	180	184	185	146	136	103	88	40	89
LOUISVILLE, KY-IN	17	2	20	3	4	4	0	6	4	4	3	27	4
MEMPHIS, TN-AR-MS	12	10	9	5	6	1	2	4	1	7	7	15	8
MIAMI, FL	10	4	5	4	1	2	0	0	0	0	1	12	1
MIDDLESEX-SOMERSET-HUNTERDON, NJ	5	10	24	8	12	8	3	1	5	1	0	7	3
MILWAUKEE-WAUKESHA, WI	17	13	19	8	2	10	0	0	4	5	1	21	1
MINNEAPOLIS-ST. PAUL, MN-WI	23	14	3	7	3	2	1	0	5	3	1	41	1

**Table A-16.** Number of Days with PSI Values Greater Than 100 at Trend Sites, 1987–1996, and All Sites in 1996 (continued)

Metropolitan Statistical Area	# of Trend Sites											Total # of Sites	PSI > 100 1996
		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996		
MONMOUTH-OCEAN, NJ	3	0	0	11	7	9	2	6	0	5	2	4	3
NASHVILLE, TN	20	4	23	4	9	1	1	2	3	2	2	27	2
NASSAU-SUFFOLK, NY	4	15	10	6	7	13	2	4	3	5	2	8	2
NEW HAVEN-MERIDEN, CT	11	20	16	7	10	22	3	11	8	8	2	10	2
NEW ORLEANS, LA	10	5	2	1	0	0	1	2	2	3	0	14	1
NEW YORK, NY	26	44	46	18	18	22	4	6	8	8	4	38	7
NEWARK, NJ	13	24	33	5	8	11	5	2	6	6	2	16	2
NORFOLK-VA BEACH-NEWPORT NEWS, VA-NC	11	5	8	0	0	1	2	4	2	0	0	12	0
OAKLAND, CA	19	14	10	3	5	6	2	3	3	12	11	29	11
OKLAHOMA CITY, OK	13	6	0	2	2	0	0	0	2	3	1	14	1
OMAHA, NE-IA	9	0	1	1	0	0	0	1	1	1	1	13	1
ORANGE COUNTY, CA	9	58	63	66	47	40	43	25	14	6	6	11	6
ORLANDO, FL	9	0	0	1	2	0	1	0	0	0	0	16	0
PHILADELPHIA, PA-NJ	37	35	35	19	14	25	3	21	6	14	5	48	22
PHOENIX-MESA, AZ	25	42	27	30	9	4	10	7	9	13	5	29	10
PITTSBURGH, PA	37	10	20	9	8	4	1	3	2	7	0	55	1
PONCE, PR	1	.	0	0	0	0	0	0	0	0	0	1	0
PORTLAND-VANCOUVER, OR-WA	12	11	8	6	8	9	2	0	2	0	4	17	4
PROVIDENCE-FALL RIVER-WARWICK, RI-MA	11	10	9	2	7	11	2	1	2	5	0	20	0
RALEIGH-DURHAM-CHAPEL HILL, NC	4	3	4	4	2	1	1	0	1	0	0	23	0
RICHMOND-PETERSBURG, VA	10	8	20	1	3	4	3	9	1	4	0	11	0
RIVERSIDE-SAN BERNARDINO, CA	36	171	180	178	144	144	156	142	124	113	94	53	94
ROCHESTER, NY	8	1	5	0	1	0	0	0	0	0	0	9	0
SACRAMENTO, CA	12	52	72	57	41	46	21	11	11	16	12	37	17
ST. LOUIS, MO-IL	53	17	20	13	8	6	3	6	11	14	4	61	4
SALT LAKE CITY-OGDEN, UT	18	7	11	15	2	19	10	3	10	1	3	23	6
SAN ANTONIO, TX	7	2	2	0	1	0	0	0	1	3	2	7	2
SAN DIEGO, CA	20	61	84	91	61	40	37	17	16	14	4	27	4
SAN FRANCISCO, CA	9	1	2	1	0	0	0	0	0	1	0	11	0
SAN JOSE, CA	8	18	16	21	11	11	2	2	0	5	2	11	2
SAN JUAN-BAYAMON, PR	10	2	0	0	0	0	0	0	0	0	1	22	1
SCRANTON-WILKES-BARRE-HAZLETON, PA	10	1	12	1	0	2	0	0	0	0	0	11	0
SEATTLE-BELLEVUE-EVERETT, WA	14	14	20	8	5	2	1	0	0	0	0	21	1
SPRINGFIELD, MA	16	3	19	5	4	5	4	7	3	4	1	13	1
SYRACUSE, NY	4	3	1	2	1	2	0	0	0	0	0	10	0
TACOMA, WA	8	9	9	4	3	1	1	0	1	0	0	9	0
TAMPA-ST. PETERSBURG-CLEARWATER, FL	20	5	1	1	3	0	1	0	0	1	2	35	2
TOLEDO, OH	5	2	6	1	0	1	0	3	1	0	0	8	1
TUSCON, AZ	18	4	6	2	0	0	0	0	0	0	0	29	0
TULSA, OK	12	2	2	2	3	2	1	1	2	4	2	13	2
VENTURA, CA	13	54	83	59	36	49	25	16	24	30	25	18	28
WASHINGTON, DC-MD-VA-WV	34	26	37	8	5	16	2	13	7	8	2	52	2
WEST PALM BEACH-BOCA RATON, FL	5	0	0	0	0	0	0	0	0	0	0	9	0
WILMINGTON-NEWARK, DE-MD	5	16	22	3	4	6	2	3	1	6	0	12	1
YOUNGSTOWN-WARREN, OH	9	0	5	1	0	1	1	0	0	1	0	15	0

**Table A-17.** (Ozone only) Number of Days with PSI Values Greater Than 100 at Trend Sites, 1987–1996,  
and All Sites in 1996

Metropolitan Statistical Area	# of Trend Sites	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total # of Sites	PSI > 100 1996
AKRON, OH	2	5	17	4	2	2	1	0	0	1	0	2	0
ALBANY-SCHENECTADY-TROY, NY	3	0	7	0	0	1	0	0	1	0	0	3	0
ALBUQUERQUE, NM	7	1	0	0	0	0	0	0	1	0	0	9	0
ALLENTOWN-BETHLEHEM-EASTON, PA	3	5	15	0	0	3	0	0	0	0	0	3	0
ATLANTA, GA	3	27	21	3	17	6	5	17	4	19	6	6	12
AUSTIN-SAN MARCOS, TX	2	0	2	1	0	1	0	0	1	0	0	2	0
BAKERSFIELD, CA	4	67	83	73	57	62	31	56	47	48	56	8	58
BALTIMORE, MD	6	26	40	8	11	20	5	14	16	14	3	8	4
BATON ROUGE, LA	3	10	10	9	18	6	2	3	2	7	2	7	4
BERGEN-PASSAIC, NJ	1	13	18	2	3	3	0	0	0	4	0	1	0
BIRMINGHAM, AL	6	7	15	1	7	0	2	5	0	15	5	6	5
BOSTON, MA-NH	4	4	15	4	1	4	1	3	1	1	0	6	0
BUFFALO-NIAGARA FALLS, NY	2	4	18	1	1	0	0	0	0	0	0	2	0
CHARLESTON-NORTH CHARLESTON, SC	3	0	0	0	0	0	1	0	0	0	0	3	0
CHARLOTTE-GASTONIA-ROCK HILL, NC-SC	3	10	21	2	3	2	0	4	0	1	3	7	6
CHICAGO, IL	16	16	22	3	0	7	3	0	2	4	2	22	3
CINCINNATI, OH-KY-IN	6	11	21	3	6	7	0	1	4	7	1	8	2
CLEVELAND-LORAIN-ELYRIA, OH	6	6	21	1	2	3	1	1	2	1	1	8	2
COLUMBUS, OH	2	1	4	0	1	3	0	0	0	1	0	4	1
DALLAS, TX	2	10	14	7	8	1	3	5	1	13	2	7	6
DAYTON-SPRINGFIELD, OH	3	2	17	3	1	1	0	3	2	2	1	4	1
DENVER, CO	5	5	4	0	2	0	0	0	0	0	0	9	0
DETROIT, MI	7	6	16	10	3	8	0	2	6	9	2	8	2
EL PASO, TX	3	17	6	13	9	7	7	4	6	3	3	4	4
FORT LAUDERDALE, FL	2	0	3	2	0	0	0	0	0	1	0	3	0
FORT WORTH-ARLINGTON, TX	2	4	11	8	5	9	2	1	8	6	3	2	3
FRESNO, CA	3	49	28	45	22	32	27	27	11	19	31	7	39
GARY, IN	4	6	13	0	3	3	2	0	1	4	3	4	3
GRAND RAPIDS-MUSKEGON-HOLLAND, MI	2	5	10	3	2	2	0	1	1	1	3	5	4
GREENSBORO—WINSTON-SALEM—HIGH POINT, NC	3	0	14	0	2	0	0	2	1	0	2	6	2
GREENVILLE-SPARTANBURG-ANDERSON, SC	2	0	8	0	0	0	1	1	0	0	0	4	1
HARRISBURG-LEBANON-CARLISLE, PA	3	5	13	0	2	0	0	1	2	0	0	3	0
HARTFORD, CT	3	10	24	9	7	12	8	9	10	7	1	3	1
HONOLULU, HI	1	0	0	0	0	0	0	0	0	0	0	1	0
HOUSTON, TX	10	66	61	41	59	42	30	26	29	54	28	12	32
INDIANAPOLIS, IN	5	3	9	2	1	0	0	0	2	2	2	7	5
JACKSONVILLE, FL	2	2	2	0	0	0	0	1	0	2	0	3	0
JERSEY CITY, NJ	1	12	18	2	7	8	1	5	1	2	2	1	2
KANSAS CITY, MO-KS	6	5	4	1	2	2	1	1	0	6	2	7	2
KNOXVILLE, TN	4	0	8	0	5	0	0	2	1	4	1	8	1
LAS VEGAS, NV-AZ	3	0	3	1	1	0	0	0	0	0	0	4	0
LITTLE ROCK-NORTH LITTLE ROCK, AR	2	1	0	0	1	0	0	0	0	1	0	2	0
LOS ANGELES-LONG BEACH, CA	13	160	178	154	132	134	143	116	107	84	62	15	63
LOUISVILLE, KY-IN	4	2	20	1	4	4	0	6	4	4	3	7	4
MEMPHIS, TN-AR-MS	3	5	8	2	4	0	0	1	0	7	6	4	7
MIAMI, FL	4	4	5	3	1	2	0	0	0	0	1	4	1
MIDDLESEX-SOMERSET-HUNTERDON, NJ	2	10	24	8	12	8	3	1	5	1	0	2	3
MILWAUKEE-WAUKESHA, WI	6	13	19	8	2	10	0	0	4	5	1	9	1
MINNEAPOLIS-ST. PAUL, MN-WI	3	1	1	0	0	0	0	0	0	0	0	5	0

**Table A-17.** (Ozone only) Number of Days with PSI Values Greater Than 100 at Trend Sites, 1987–1996, and All Sites in 1996 (continued)

Metropolitan Statistical Area	# of Trend Sites											Total # of Sites	PSI > 100 1996
		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996		
MONMOUTH-OCEAN, NJ	1	0	0	11	7	9	2	6	0	5	2	2	3
NASHVILLE, TN	7	3	23	2	9	1	1	2	3	2	2	9	2
NASSAU-SUFFOLK, NY	1	11	8	6	7	13	2	4	3	5	2	2	2
NEW HAVEN-MERIDEN, CT	2	17	16	7	8	20	3	7	6	8	2	2	2
NEW ORLEANS, LA	5	5	2	1	0	0	1	2	2	3	0	6	1
NEW YORK, NY	4	16	32	12	13	19	3	6	8	7	4	8	7
NEWARK, NJ	3	23	30	4	7	8	5	2	4	6	2	3	2
NORFOLK-VIRGINIA BEACH-NEWPORT NEWS, VA-NC	2	3	7	0	0	1	2	4	2	0	0	3	0
OAKLAND, CA	7	14	10	3	5	5	2	3	3	12	11	9	11
OKLAHOMA CITY, OK	4	1	0	0	2	0	0	0	0	3	0	4	0
OMAHA, NE-IA	3	0	0	0	0	0	0	0	0	0	0	3	0
ORANGE COUNTY, CA	3	54	53	48	43	40	41	25	14	5	6	4	6
ORLANDO, FL	3	0	0	1	2	0	1	0	0	0	0	4	0
PHILADELPHIA, PA-NJ	8	34	35	17	14	25	3	21	5	14	5	10	5
PHOENIX-MESA, AZ	9	2	4	0	3	0	5	5	4	7	5	10	5
PITTSBURGH, PA	6	5	16	2	0	2	0	3	2	6	0	11	1
PONCE, PR	.	.	0	0	0	0	0	0	0	0	0	.	0
PORTLAND-VANCOUVER, OR-WA	3	2	2	0	4	1	2	0	0	0	4	4	4
PROVIDENCE-FALL RIVER-WARWICK, RI-MA	2	10	8	2	7	11	2	1	2	5	0	3	0
RALEIGH-DURHAM-CHAPEL HILL, NC	1	0	0	0	2	0	0	0	1	0	0	8	0
RICHMOND-PETERSBURG, VA	4	7	20	1	3	4	3	9	1	4	0	4	0
RIVERSIDE-SAN BERNARDINO, CA	16	168	179	169	138	141	154	141	123	107	91	20	91
ROCHESTER, NY	2	1	5	0	1	0	0	0	0	0	0	2	0
SACRAMENTO, CA	6	30	49	18	16	30	20	8	11	16	12	14	17
ST. LOUIS, MO-IL	16	14	20	7	8	6	3	6	11	14	4	17	4
SALT LAKE CITY-OGDEN, UT	4	2	8	7	2	1	0	0	1	1	0	6	3
SAN ANTONIO, TX	2	2	2	0	1	0	0	0	1	3	2	2	2
SAN DIEGO, CA	8	60	80	82	60	40	37	17	16	14	4	9	4
SAN FRANCISCO, CA	3	1	0	0	0	0	0	0	0	1	0	3	0
SAN JOSE, CA	4	18	11	6	2	3	2	2	0	5	2	6	2
SAN JUAN-BAYAMON, PR	.	0	0	0	0	0	0	0	0	0	0	.	0
SCRANTON—WILKES-BARRE—HAZLETON, PA	3	1	12	1	0	2	0	0	0	0	0	4	0
SEATTLE-BELLEVUE-EVERETT, WA	1	0	1	0	2	0	0	0	0	0	0	3	1
SPRINGFIELD, MA	4	2	19	5	4	5	3	7	3	3	0	4	0
SYRACUSE, NY	.	0	0	0	0	0	0	0	0	0	0	2	0
TACOMA, WA	1	0	0	0	2	0	0	0	1	0	0	2	0
TAMPA-ST. PETERSBURG-CLEARWATER, FL	5	5	0	1	3	0	1	0	0	1	2	7	2
TOLEDO, OH	2	2	6	1	0	1	0	3	1	0	0	4	1
TUSCON, AZ	5	0	0	0	0	0	0	0	0	0	0	7	0
TULSA, OK	3	1	2	2	3	2	0	1	2	4	2	3	2
VENTURA, CA	6	54	83	59	36	49	25	16	24	30	25	8	28
WASHINGTON, DC-MD-VA-WV	13	21	35	5	5	16	2	13	7	8	2	18	2
WEST PALM BEACH-BOCA RATON, FL	1	0	0	0	0	0	0	0	0	0	0	2	0
WILMINGTON-NEWARK, DE-MD	1	16	22	3	4	6	2	3	1	6	0	4	1
YOUNGSTOWN-WARREN, OH	1	0	5	1	0	1	0	0	0	1	0	3	0

**Table A-18.** Total Number of Days with PSI Values Greater Than 100 at Trend Sites—Summary, 1987–1996

Metropolitan Statistical Area	# of Trend Sites											Total # of Sites	PSI > 100 1996
		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996		
<b>All Pollutants</b>													
All Trend Sites	1,333	1,565	1,987	1,300	1,050	1,043	712	705	635	725	480	1,921	582
LOS ANGELES–LONG BEACH, CA	36	201	239	226	180	184	185	146	136	103	88	40	89
RIVERSIDE–SAN BERNADINO, CA	36	171	180	178	144	144	156	142	124	113	94	53	94
All Except LA and Riverside	1,261	1,193	1,568	896	726	715	371	417	375	509	298	1,828	399
<b>Ozone Only</b>													
All Trend Sites	380	1,221	1,696	922	849	877	607	636	545	666	429	534	495
LOS ANGELES–LONG BEACH, CA	13	160	178	154	132	134	143	116	107	84	62	15	63
RIVERSIDE–SAN BERNADINO, CA	16	168	179	169	138	141	154	141	123	107	91	20	91
All Except LA and Riverside	351	893	1,339	599	579	602	310	379	315	475	276	499	341